

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[OAR-2003-0005 - FRL-7546-8]

RIN 2060-AG96

**National Emission Standards for Hazardous Air Pollutants:
Surface Coating of Metal Cans**

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: This action promulgates national emission standards for hazardous air pollutants (NESHAP) for metal can surface coating operations located at major sources of hazardous air pollutants (HAP). The final standards implement section 112(d) of the Clean Air Act (CAA) by requiring these operations to meet HAP emission standards reflecting the application of the maximum achievable control technology (MACT). The final rule will protect air quality and promote public health by reducing emissions of HAP from facilities in the metal can surface coating source category. The HAP emitted by these facilities include ethylene glycol monobutyl ether (EGBE) and other glycol ethers, xylenes, hexane, methyl isobutyl ketone (MIBK), and methyl ethyl ketone (MEK). These HAP are associated with a variety of adverse health effects

which include chronic health disorders (e.g., birth defects and effects on the central nervous system, liver, and heart) and acute health disorders (e.g., irritation of the lung, skin, and mucous membranes, and effects on the central nervous system), and possibly cancer. In general, these findings have only been shown with concentrations higher than those typically found in the ambient air. The final standards are expected to reduce nationwide HAP emissions from major sources in this source category by approximately 6,160 megagrams per year (Mg/yr) (6,800 tons per year (tpy)) or 70 percent from the baseline organic HAP emissions of 8,700 Mg/yr (9,600 tpy).

DATES: This rule is effective [INSERT DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER]. The incorporation by reference of certain publications listed in today's final rule is approved by the Director of the Federal Register as of [INSERT DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER].

ADDRESSES: Docket. Docket ID No. OAR-2003-0005 (formerly Docket No. A-98-41) is located at the EPA Docket Center, EPA West, U.S. EPA (6102T), 1301 Constitution Avenue, NW, Washington, DC 20460.

Background Information Document. A background information document (BID) for the promulgated NESHAP may be obtained from the docket; the U.S. EPA Library (C267-01), Research Triangle Park, NC 27711, telephone number (919) 541-2777; or from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161, telephone number (703) 487-4650. Refer to "National Emission Standards for Hazardous Air Pollutants: Surface Coating of Metal Cans Background Information for Final Standards - Summary of Public Comments and Responses" (EPA-453/R-03-009). The promulgation BID contains a summary of public comments made on the proposed standards and EPA responses to the public comments.

FOR FURTHER INFORMATION CONTACT: Mr. Paul Almodóvar, Coatings and Consumer Products Group, Emission Standards Division (C539-03), U.S. EPA, Research Triangle Park, NC 27711; telephone number (919) 541-0283; facsimile number (919) 541-5689; electronic mail address: almodovar.paul@epa.gov.

SUPPLEMENTARY INFORMATION: Regulated Entities. The source category definition includes facilities that apply coatings during any stage of the can manufacturing

process to metal cans or ends (including decorative tins) or to metal crowns or closures for any type of can body. In general, facilities that coat metal cans are covered under the North American Industrial Classification System (NAICS) codes listed in Table 1 of this preamble.

However, facilities classified under other NAICS codes may be subject to the final standards if they meet the applicability criteria. Not all facilities classified under the NAICS codes in the following table will be subject to the standards because some of the classifications cover products outside the scope of the NESHAP for the surface coating of metal cans.

Table 1. Categories and Entities Potentially Regulated by the Final Standards

Subcategory	NAICS	Examples of Potentially Regulated Entities
One- and two-piece draw and iron (D&I) can body coatings	332431	Two-piece beverage can facility.
Sheetcoatings	332431 332115 332116 332812 332999	Three-piece food can facility, two-piece D&I facility, one-piece aerosol can facility, etc.
Three-piece can assembly coatings	332431	Can assembly facility.
End coatings	332431 332812	End manufacturing facilities.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by this action. To determine whether your coating operation is regulated by this action, you should examine the applicability criteria in §63.3481 of the final rule.

Docket. The EPA has established an official public docket for this action under Docket ID No. OAR-2003-0005 (formerly Docket No. A-98-41). The official public docket consists of the documents specifically referenced in this action, any public comments received, and other information related to this action. Although a part of the official docket, the public docket does not include confidential business information or other information whose disclosure is restricted by statute. The official public docket is the collection of materials that is available for public viewing at the EPA Docket Center, EPA West, Room B-102, 1301 Constitution Avenue, NW, Washington, DC 20460. The Docket Center is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Reading Room is (202) 566-1744, and the telephone number for the Docket Center is (202) 566-1742. A reasonable fee may be

charged for copying docket materials.

Electronic Docket Access. You may access this Federal Register document electronically through the EPA Internet under the "Federal Register" listings at <http://www.epa.gov/fedrgstr/>.

An electronic version of the public docket is available through EPA's electronic public docket and comment system, EPA Dockets. You may use EPA Dockets at <http://www.epa.gov/edocket/> to view public comments, access the index listing of the contents of the official public docket, and to access those documents in the public docket that are available electronically. Although not all docket materials may be available electronically, you may still access any of the publicly available docket materials through the docket facility identified above. Once in the system, select "search," then key in the appropriate docket identification number. WorldWide Web (WWW). In addition to being available in the docket, an electronic copy of the final rule will also be available on the WWW. Following the Administrator's signature, a copy of the final rule will be posted at www.epa.gov/ttn/oarpg on EPA's Technology Transfer Network (TTN) policy and guidance page for newly

proposed or promulgated rules. The TTN provides information and technology exchange in various areas of air pollution control. If more information regarding the TTN is needed, call the TTN HELP line at (919) 541-5384.

Judicial Review. Under section 307(b)(1) of the CAA, judicial review of the final rule is available only by filing a petition for review in the U.S. Court of Appeals for the District of Columbia Circuit by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER]. Under section 307(d)(7)(B) of the CAA, only an objection to the rule that was raised with reasonable specificity during the period for public comment can be raised during judicial review. Under section 307(b)(2) of the CAA, the requirements that are the subject of today's final rule may not be challenged later in civil or criminal proceedings brought by EPA to enforce the requirements.

Outline. The information presented in this preamble is organized as follows:

- I. Background
 - A. What is the source of authority for development of NESHAP?
 - B. What criteria are used in the development of NESHAP?
 - C. What are the primary sources of emissions and what are the emissions?
 - D. What are the health effects associated with HAP emissions from the surface coating of metal cans?

- II. Summary of the Final Rule
 - A. What source categories and subcategories are affected by the final rule?
 - B. What is the affected source?
 - C. What are the emission limits, operating limits, and other standards?
 - D. What are the testing and initial compliance requirements?
 - E. What are the continuous compliance provisions?
 - F. What are the notification, recordkeeping, and reporting requirements?
- III. What are the significant comments and changes since proposal?
 - A. End Coatings - Repair Spray Coatings
 - B. Affected Source Clarification
 - C. Monitoring, Recordkeeping, and Reporting Costs
 - D. Performance Test Costs
 - E. Calculation of Organic HAP Emission Reduction
- IV. Summary of Environmental, Energy, and Economic Impacts
 - A. What are the air impacts?
 - B. What are the cost impacts?
 - C. What are the economic impacts?
 - D. What are the non-air health, environmental, and energy impacts?
 - E. Potential Changes to the Impacts
- V. Statutory and Executive Order Reviews
 - A. Executive Order 12866: Regulatory Planning and Review
 - B. Paperwork Reduction Act
 - C. Regulatory Flexibility Act
 - D. Unfunded Mandates Reform Act
 - E. Executive Order 13132: Federalism
 - F. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments
 - G. Executive Order 13045: Protection of Children from Environmental Health & Safety Risks
 - H. Executive Order 13211: Actions Concerning Regulations that Significantly Affect Energy Supply, Distribution, or Use
 - I. National Technology Transfer and Advancement Act
 - J. Congressional Review Act

I. Background

- A. What is the source of authority for development of

NESHAP?

Section 112 of the CAA requires us to list categories and subcategories of major sources and area sources of HAP and to establish NESHAP for the listed source categories and subcategories. The metal can (surface coating) category of major sources was listed on July 16, 1992 (57 FR 31576) under the Surface Coating Processes industry group. Major sources of HAP are those that emit or have the potential to emit considering controls equal to or greater than 9.1 Mg/yr (10 tpy) of any one HAP or 22.7 Mg/yr (25 tpy) of any combination of HAP.

B. What criteria are used in the development of NESHAP?

Section 112(c)(2) of the CAA requires that we establish NESHAP for the control of HAP from both new and existing major sources, based on the criteria set out in section 112(d). The CAA requires the NESHAP to reflect the maximum degree of reduction in emissions of HAP that is achievable, taking into consideration the cost of achieving the emission reduction, any non-air quality health and environmental impacts, and energy requirements. This level of control is commonly referred to as the MACT.

The MACT floor is the minimum control level allowed for NESHAP and is defined under section 112(d)(3) of the CAA. In essence, the MACT floor ensures that the standards are set at a level that ensures that all major sources achieve the level of control at least as stringent as that already achieved by the better-controlled and lower-emitting sources in each source category or subcategory. For new sources, the MACT floor cannot be less stringent than the emission control that is achieved in practice by the best-controlled similar source. The MACT standards for existing sources can be less stringent than standards for new sources, but they cannot be less stringent than the average emission limitation achieved by the best-performing 12 percent of existing sources in the category or subcategory (or the best-performing five sources for categories or subcategories with fewer than 30 sources).

In developing the final NESHAP, we considered control options that are more stringent than the floor, taking into consideration the cost of achieving the emission reduction, any non-air quality health and environmental impacts, and energy requirements. In the final rule, EPA is promulgating standards for both

existing and new sources consistent with these statutory requirements.

C. What are the primary sources of emissions and what are the emissions?

The primary emission sources in metal can surface coating operations are coating application lines, drying and curing ovens, mixing and thinning areas, and equipment cleaning. Coating application lines and drying and curing ovens are the largest sources of HAP emissions. Recent reformulation efforts involving the primary coatings used in metal can surface coating operations are likely to continue as a result of the final rule and will serve to reduce HAP emissions from these sources. Mixing and thinning areas and equipment cleaning are smaller HAP emission sources, and work practice standards are used to limit the HAP emissions from these sources.

Available emission data collected during the development of the NESHAP show that the primary organic HAP emitted from metal can coating operations include EGBE and other glycol ethers, xylenes, hexane, MEK, and MIBK. Other significant organic HAP identified include isophorone, ethyl benzene, toluene, cumene, naphthalene,

and formaldehyde. Organic HAP emissions are regulated by the final metal can surface coating rule.

D. What are the health effects associated with HAP emissions from the surface coating of metal cans?

Ethylene glycol monobutyl ether and other glycol ethers, xylenes, hexane, MEK, and MIBK account for 95 percent of the nationwide HAP emissions from this source category. These HAP are associated with a variety of adverse health effects which include chronic health disorders (e.g., birth defects and effects on the central nervous system, liver, and heart) and acute health disorders (e.g., irritation of the lung, skin, and mucous membranes, and effects on the central nervous system), and possibly cancer.

We do not have current detailed data on each of the facilities covered by these emission standards for this source category or on the people living around the facilities that would be necessary to conduct an analysis to determine the actual population exposures to the HAP emitted from these facilities and potential for resultant health effects. Therefore, we do not know the extent to which the adverse health effects described above occur in the populations surrounding these facilities. However,

to the extent that adverse effects do occur, the final rule will reduce emissions and subsequent exposures.

II. Summary of the Final Rule

A. What source categories and subcategories are affected by the final rule?

The final rule applies to you if you own or operate a metal can surface coating operation that uses at least 5,700 liters (1,500 gallons (gal)) of coatings per year and is a major source, is located at a major source, or is part of a major source of HAP emissions, whether or not you manufacture the metal can substrate. The surface coating operations themselves are not required to be major sources of HAP emissions in order for the surface coating operations at a major source facility to be covered by the final rule.

A metal can surface coating facility is any facility that coats metal cans or ends (including decorative tins) or metal crowns or closures for any type of can during any stage of the can manufacturing process. It includes the coating of metal sheets for subsequent processing into cans or can parts, but not the coating of metal coils for cans or can parts. (Coil coating for cans and can parts is included in the NESHAP for the surface

coating of metal coil; 40 CFR part 63, subpart SSSS).

The source category does not include the coating of pails and drums, which is covered in the NESHAP for the surface coating of miscellaneous metal parts and products (40 CFR part 63, subpart MMMM).

We have established four subcategories in the metal can surface coating category, including: one- and two-piece D&I can body coating, sheetcoating, three-piece can body assembly coating, and end coating. Some metal can surface coating facilities include coating operations in more than one subcategory. In those cases, the facilities are subject to more than one emission limit.

You are not subject to the final rule if your coating operation is located at an area source. An area source of HAP is any facility that has the potential to emit HAP but is not a major source. You may establish area source status by limiting the source's potential to emit HAP through appropriate mechanisms available through the permitting authority.

The outcome of two delisting petitions that have been submitted to EPA could significantly affect which sources will be subject to the final rule. These petitions are the petition to delist EGBE from the HAP

list and the petition to delist the two-piece beverage can segment from the source category list. Both petitions are being reviewed by EPA. If granted, the delisting of either EGBE or the two-piece beverage can segment could significantly decrease the number of sources affected by the final rule. Once decisions on the petitions are made, we will expeditiously determine whether changes to the final rule are warranted.

B. What is the affected source?

We define an affected source as a stationary source, group of stationary sources, or part of a stationary source to which a specific emission standard applies. The final rule for metal can surface coating defines the affected source as the collection of all surface coating operations within a facility associated with metal cans and ends (including decorative tins) or metal crowns or closures. Those operations involve the following: preparation of a coating for application (e.g., mixing with thinners); process equipment involving storage, transfer, and handling; process equipment involving the application of coatings, thinners, and cleaning materials; handling of waste materials generated by a coating operation; and associated curing and drying

equipment.

The affected source does not include research or laboratory equipment or janitorial, building, or facility maintenance operations.

C. What are the emission limits, operating limits, and other standards?

Emission Limits. The final rule limits organic HAP emissions from each new or reconstructed affected source using the emission limits in Table 2 of this preamble. The final emission limits for each existing affected source are given in Table 3 of this preamble. You can choose from several compliance options in the final rule to achieve the emission limit that applies to your affected source. You can comply by applying materials (coatings and thinners) that meet the emission limit, either individually or collectively. You can also use a capture system and add-on control equipment to meet the emission limit, or you can comply by using a combination of both approaches. If you use a capture system and add-on control equipment, there are alternative control efficiency or outlet concentration limits that you may use to simplify and reduce your recordkeeping and reporting requirements. The alternative emission limits

for affected sources using the control efficiency/outlet concentration compliance option are provided in Table 4 of this preamble.

Table 2. Emission Limits for New or Reconstructed Affected Sources

If you apply surface coatings to metal cans or metal can parts in this subcategory...	for all coatings of this type...	then, you must meet the following organic HAP emission limit in kilograms (kg) HAP/liter solids (lb) HAP/gal solids) ^{1,2} :
1. One- and two-piece D&I can body coating	a. two-piece beverage cans - all coatings	0.04 (0.31)
	b. two-piece food cans - all coatings	0.06 (0.50)
	c. one-piece aerosol cans - all coatings	0.08 (0.65)
2. Sheetcoating	sheetcoating	0.02 (0.17)
3. Three-piece can assembly	a. inside spray	0.12 (1.03)
	b. aseptic side seam stripes on food cans	1.48 (12.37)
	c. nonaseptic side seam stripes on food cans	0.72 (5.96)
	d. side seam stripes on general line nonfood cans	1.18 (9.84)

	e. side seam stripes on aerosol cans	1.46 (12.14)
4. End coating	a. aseptic end seal compounds	0.06 (0.54)
	b. nonaseptic end seal compounds	0.00 (0.00)
	c. repair sprays	0.64 (5.34)

¹ If you apply surface coatings of more than one type within any one subcategory, you may calculate an overall subcategory emission limit according to 40 CFR 63.3531(i).

² Rounding differences in specific emission limits are attributable to unit conversions.

Table 3. Emission Limits for Existing Affected Sources

If you apply surface coatings to metal cans or metal can parts in this subcategory...	for all coatings of this type...	then, you must meet the following organic HAP emission limit in kg HAP/liter solids (lb HAP/gal solids)^{1,2}:
1. One- and two-piece D&I can body coating	a. two-piece beverage cans - all coatings	0.07 (0.59)
	b. two-piece food cans - all coatings	0.06 (0.51)
	c. one-piece aerosol cans - all coatings	0.12 (0.99)
2. Sheetcoating	sheetcoating	0.03 (0.26)
3. Three-piece can assembly	a. inside spray	0.29 (2.43)

	b. aseptic side seam stripes on food cans	1.94 (16.16)
	c. nonaseptic side seam stripes on food cans	0.79 (6.57)
	d. side seam stripes on general line nonfood cans	1.18 (9.84)
	e. side seam stripes on aerosol cans	1.46 (12.14)
4. End coating	a. aseptic end seal compounds	0.06 (0.54)
	b. nonaseptic end seal compounds	0.00 (0.00)
	c. repair sprays	2.06 (17.17)

¹ If you apply surface coatings of more than one type within any one subcategory, you may calculate an overall subcategory emission limit according to 40 CFR 63.3531(i).

² Rounding differences in specific emission limits are attributable to unit conversions.

Table 4. Emission Limits for Affected Sources Using the Control Efficiency/Outlet Concentration Compliance Option

If you use the control efficiency/outlet concentration option to comply with the emission limitations for any coating operation(s)...	Then you must comply with one of the following by using an emissions control system to...
--	--

1. In a new or reconstructed affected source	a. reduce emissions of total HAP, measured as total hydrocarbons (THC) (as carbon), ¹ by 97 percent; or
2. In an existing affected source	b. limit emissions of total HAP, measured as THC (as carbon) ¹ to 20 parts per million by volume, dry (ppmvd) at the control device outlet and use a permanent total enclosure.

¹ You may choose to subtract methane from THC as carbon measurements.

Operating Limits. If you reduce emissions by using a capture system and add-on control device (other than a solvent recovery system for which you conduct a liquid-liquid material balance), the operating limits apply to you. These limits are site-specific parameter limits you determine during the initial performance test of the system. For capture systems that are not permanent total enclosures (PTE), you must establish average volumetric flow rates or duct static pressure limits for each

capture device (or enclosure) in each capture system.

For capture systems that are PTE, you must establish limits on average facial velocity or pressure drop across openings in the enclosure.

For thermal oxidizers, you must monitor the combustion temperature. For catalytic oxidizers, you must monitor the temperature immediately before and after the catalyst bed or you must monitor the temperature at the inlet to the catalyst bed and implement a site-specific inspection and maintenance plan for the catalytic oxidizer. For carbon adsorbers for which you do not conduct a liquid-liquid material balance, you must monitor the carbon bed temperature and the amount of steam or nitrogen used to desorb the bed. For condensers, you must monitor the outlet gas temperature from the condenser. For concentrators, you must monitor the temperature of the desorption concentrate stream and the pressure drop of the dilute stream across the concentrator.

All site-specific parameter limits that you establish must reflect operation of the capture system and control devices during a performance test that demonstrates achievement of the emission limits during

representative operating conditions.

Work Practice Standards. In lieu of emission standards, section 112(h) of the CAA allows work practice standards or other requirements to be established when a pollutant cannot be emitted through a conveyance or capture system or when measurement is not practicable because of technological and economic limitations. Many metal can surface coating facilities use work practice measures to reduce HAP emissions from mixing, cleaning, storage, and waste handling areas as part of their standard operating procedures. They use those measures to decrease solvent usage and minimize exposure to workers. However, we do not have data to accurately quantify the emissions reductions achievable by the work practice measures, and it is not feasible to measure emissions or enforce a numerical standard for emissions from those operations.

Based on information received from the metal can industry during the development of the NESHAP and information available from several similar coating industries for which NESHAP have already been promulgated, we identified a variety of work practice measures for cleaning, storage, mixing, and waste

handling. If you use a capture system and add-on control device to reduce emissions, you are required to develop and implement a work practice plan that specifies practices and procedures to ensure that, at a minimum, all organic-HAP-containing liquids and waste materials are stored in closed containers; spills of all organic-HAP-containing materials are minimized; closed containers or pipes are used to transport all organic-HAP-containing materials; mixing vessels for organic-HAP-containing materials are kept closed except when adding to, removing, or mixing the contents; and organic HAP emissions are minimized during all cleaning operations.

If your affected source has an existing, documented plan that incorporates steps taken to minimize emissions from the aforementioned sources, then your existing plan may be used to satisfy the requirement for a work practice plan.

Operations During Startup, Shutdown, or Malfunction.

If you use a capture system and add-on control device for compliance, you are required to develop and operate according to a startup, shutdown, and malfunction plan (SSMP) during periods of startup, shutdown, or malfunction (SSM) of the capture system and add-on

control device.

The NESHAP General Provisions at 40 CFR part 63, subpart A, codify certain procedures and criteria for all 40 CFR part 63 NESHAP and apply to you as indicated in the final rule. The General Provisions contain administrative procedures, preconstruction review procedures for new sources, and procedures for conducting compliance-related activities, such as notifications, recordkeeping and reporting, performance testing, and monitoring. The final rule refers to individual sections of the General Provisions to emphasize key sections that are relevant. However, unless specifically overridden in the final rule, all of the applicable General Provisions requirements apply to you.

D. What are the testing and initial compliance requirements?

Existing affected sources must be in compliance with the final rule no later than [INSERT DATE 3 YEARS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER]. New and reconstructed affected sources must be in compliance upon initial startup of the affected source or by [INSERT DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER], whichever is later. However,

affected sources are not required to demonstrate compliance until the end of the initial compliance period when they will have accumulated the necessary records to document the rolling 12-month organic HAP emission rate.

Compliance with the emission limits is based on a rolling 12-month organic HAP emission rate determined each month. Each 12-month period is a compliance period. The initial compliance period, therefore, is the 12-month period beginning on the compliance date. If the compliance date occurs on any day other than the first day of a month, then the initial compliance period begins on the compliance date and extends through the end of that month plus the following 12 months. In other words, the initial compliance period could be almost 13 months long, but all subsequent compliance periods will be 12 months long. We have defined "month" as a calendar month or a pre-specified period of 28 to 35 days to allow for flexibility at sources where data are based on a business accounting period.

Being "in compliance" means that the owner or operator of the affected source meets the requirements to achieve the final emission limitations during the initial compliance period. However, the owner or operator will

not have accumulated the records for the rolling 12-month organic HAP emission rate until the end of the initial compliance period. At the end of the initial compliance period, the owner or operator uses the data and records generated to determine whether or not the affected source is in compliance with the organic HAP emission limit and other applicable requirements for that period. If the affected source does not meet the applicable limit and other requirements, it is out of compliance for the entire compliance period.

Emission Limits. There are four options for complying with the emission limits, and the testing and initial compliance requirements vary accordingly.

Option 1: Compliance Based on the Compliant Material Option. If you demonstrate compliance based on the compliant material option, you must determine the mass of organic HAP in all coatings and thinners used each month during the initial compliance period and the volume fraction of coating solids in all coatings used each month during the initial compliance period. To determine the mass of organic HAP in coatings and thinners and the volume fraction of coating solids, you may use either manufacturer's data or test results using

the test methods listed below. You may use alternative test methods provided that you get EPA approval in accordance with 40 CFR 63.7(f). However, if there is any inconsistency between the test method results (either EPA's or an approved alternative) and manufacturer's data, the test method results will prevail for compliance and enforcement purposes unless, after consultation, you can demonstrate to the satisfaction of the enforcement agency that the formulation data are correct.

- For organic HAP content, use Method 311 of 40 CFR part 63, appendix A.

- The final rule allows you to use nonaqueous volatile matter as a surrogate for organic HAP. If you choose that option, then use Method 24 of 40 CFR part 60, appendix A, to determine nonaqueous volatile matter.

- For volume fraction of coating solids, use either information from the supplier or manufacturer of the material, American Society of Testing and Materials (ASTM) Method D2697-86(1998), or ASTM Method D6093-97.

To demonstrate initial compliance based on the compliant materials option, you are required to demonstrate that the organic HAP content of each coating meets the applicable emission limits and that you use no

organic-HAP-containing thinners.

Option 2: Compliance Based on the Emission Rate without Add-on Controls Option. If you demonstrate compliance based on the emission rate without add-on controls option, you must determine the mass of organic HAP in all coatings and thinners used in each coating type segment each month during the initial compliance period, and the volume fraction of coating solids in all coatings in each coating type segment used each month during the initial compliance period.

To determine the mass of organic HAP in coatings and thinners and the volume fraction of coating solids, you may use either manufacturer's data or test results using the test methods listed below. You may use alternative test methods provided that you get EPA approval in accordance with 40 CFR 63.7(f). However, if there is any inconsistency between the test method results (either EPA's or an approved alternative) and manufacturer's data, the test method results will prevail for compliance and enforcement purposes unless, after consultation, you can demonstrate to the satisfaction of the enforcement agency that the formulation data are correct.

- For organic HAP content, use Method 311 in 40 CFR

part 63, appendix A.

- The final rule allows you to use nonaqueous volatile matter as a surrogate for organic HAP. If you choose that option, use Method 24 in 40 CFR part 60, appendix A to determine nonaqueous volatile matter.

- For volume fraction of coating solids, use either information from the supplier or manufacturer of the material, ASTM Method D2697-86 (Reapproved 1998), or ASTM Method D6093-97.

To demonstrate initial compliance based on the emission rate without add-on controls option, you are required to demonstrate that the total mass of organic HAP in all coatings and thinners in each coating type segment divided by the total volume of coating solids in that coating type segment meets the applicable emission limit. For the emission rate without add-on controls option, you are required to perform the following:

- Determine the quantity of each coating and thinner used in each coating type segment.
- Determine the mass of organic HAP in each coating and thinner in each coating type segment.
- Determine the volume fraction of coating solids for each coating in each coating type segment.

- Calculate the total mass of organic HAP in all materials in each coating type segment and total volume of coating solids in each coating type segment for each month of the initial compliance period. You may subtract from the total mass of organic HAP the amount contained in waste materials you send to a hazardous waste treatment, storage, and disposal facility regulated under 40 CFR part 262, 264, 265, or 266.

- Calculate the ratio of the total mass of organic HAP for the materials used in each coating type segment to the total volume of coating solids used in the segment.

- Record the calculations and results and include them in your Notification of Compliance Status.

Alternatively, if you apply coatings in more than one coating type segment within a subcategory, you may calculate an overall HAP emission limit for the subcategory and demonstrate compliance by including all coatings and thinners in all coating type segments in the subcategory in calculating the ratio of total mass of organic HAP to total volume of coating solids. If you use this approach, you must use the subcategory limit throughout the 12-month initial compliance period and may

not switch between compliance with limits for individual coating type segments and an overall limit. Also, if you follow this approach, you may not include coatings in different subcategories in determining your overall HAP limit.

Option 3: Compliance Based on the Emission Rate with Add-on Controls Option. If you use a capture system and add-on control device other than a solvent recovery system for which you conduct a liquid-liquid material balance, your testing and initial compliance requirements are as follows:

- Conduct an initial performance test to determine the capture and control efficiencies of the equipment and to establish operating limits to be achieved on a continuous basis.

- Determine the mass of organic HAP in each material and the volume fraction of coating solids for each coating used each month of the initial compliance period.

- Calculate the organic HAP emissions from the controlled coating operations using the capture and control efficiencies determined during the performance test and the total mass of organic HAP in materials used in controlled coating operations.

- Calculate the ratio of the total mass of organic HAP emissions to the total volume of coating solids used each month of the initial compliance period.

- Record the calculations and results and include them in the Notification of Compliance Status.

If you use a capture system and add-on control device other than a solvent recovery system for which you conduct liquid-liquid material balances, you must determine both the efficiency of the capture system and the emissions reduction efficiency of the control device. To determine the capture efficiency, you must either verify the presence of a PTE using EPA Method 204 of 40 CFR part 51, appendix M, or use one of the protocols in §63.3544 of the final rule to measure capture efficiency. If you have a PTE, apply and dry all the materials within the PTE, and route all exhaust gases from the PTE to a control device, then you may assume 100 percent capture.

To determine the emissions reduction efficiency of the control device, you must conduct measurements of the inlet and outlet gas streams. The test must consist of three runs, each run lasting at least 1 hour, using the following EPA Methods in 40 CFR part 60, appendix A:

- Method 1 or 1A for selection of the sampling

sites.

- Method 2, 2A, 2C, 2D, 2F, or 2G to determine the gas volumetric flow rate.

- Method 3, 3A, or 3B for gas analysis to determine dry molecular weight. You may also use as an alternative to Method 3B, the manual method for measuring the oxygen, carbon dioxide, and carbon monoxide content of exhaust gas in ANSI/ASME PTC 19.10-1981.

- Method 4 to determine stack moisture.

- Method 25 or 25A to determine organic volatile matter concentration.

Alternatively, any other test method or data that have been validated according to the applicable procedures in Method 301 of 40 CFR part 63, appendix A, and approved by the Administrator could be used.

If you use a solvent recovery system, you may determine the overall control efficiency using a liquid-liquid material balance instead of conducting an initial performance test. If you use the material balance alternative, you are required to measure the amount of all materials used in the affected source during each month of the initial compliance period and determine the volatile matter contained in these materials. You must

also measure the amount of volatile matter recovered by the solvent recovery system each month of the compliance period. Then, you must compare the amount recovered to the amount used to determine the overall control efficiency and apply this efficiency to the ratio of organic HAP to coating solids for the materials used. You must record the calculations and results and include them in your Notification of Compliance Status.

Alternatively, if you apply coatings in more than one coating type segment within a subcategory, you may calculate an overall HAP emission limit for the subcategory and demonstrate compliance by including all coatings and thinners in all coating type segments in the subcategory in calculating the ratio of total mass of organic HAP to total volume of coating solids. If you use this approach, you must use the subcategory limit throughout the compliance period and may not switch between compliance with limits for individual coating type segments and an overall limit. Also, if you follow this approach, you may not include coatings in different subcategories in determining your overall HAP limit.

Operating Limits. As mentioned above, you must establish operating limits as part of the initial

performance test of an emission capture and control system. The operating limits are the values of certain parameters measured for capture systems and control devices during the most recent performance test that demonstrated compliance with the emission limits. The final rule specifies the parameters to monitor for the types of emission control systems commonly used in the industry. Table 4 to the final rule summarizes the monitoring requirements for each type of control device.

You are required to install, calibrate, maintain, and continuously operate all monitoring equipment according to the manufacturer's specifications and ensure that the continuous parameter monitoring systems (CPMS) meet the requirements in §63.3547 of the final rule. If you use control devices other than those identified in the final rule, you must submit the operating parameters to be monitored to the Administrator for approval. The authority to approve the parameters to be monitored is retained by EPA and is not delegated to States.

Work Practice Standards. If you use a capture system and control device for compliance, you are required to develop and implement on an ongoing basis a work practice plan for minimizing organic HAP emissions

from storage, mixing, material handling, and waste handling operations. That plan must include a description of all steps taken to minimize emissions from those sources (e.g., using closed storage containers, implementing practices to minimize emissions during filling and transfer of contents from containers, using spill minimization techniques, etc.). You must make the plan available for inspection if the Administrator requests to see it.

Operations during Startup, Shutdown, or Malfunction.

If you use a capture system and control device for compliance, you are required to develop and operate according to an SSMP during periods of SSM of the capture system and control device.

Option 4: Compliance Based on the Control Efficiency/Outlet Concentration Option. If you use a capture system and add-on control device other than a solvent recovery system for which you conduct a liquid-liquid material balance, you may meet either of the applicable alternative limits summarized in Table 4 of this preamble instead of the organic HAP emission rate limits summarized in Tables 2 and 3 of this preamble. Prior to the initial performance test, you are required

to install control device parameter monitoring equipment to be used to demonstrate compliance with the capture and control efficiencies (or the capture efficiency of the capture system and the oxidizer outlet concentration) and to establish operating limits to be achieved on a continuous basis. During the initial compliance test, you must use the control device parameter monitoring equipment to establish parameter values that represent your operating requirements for the control systems. You must record the initial performance test results and include them in the Notification of Compliance Status.

If you use a capture system and add-on control device other than a solvent recovery system for which you conduct liquid-liquid material balances, you must verify that the efficiency of the capture system is 100 percent and determine the emissions reduction efficiency of the control device. To verify the capture efficiency, you must either verify the presence of a PTE using EPA Method 204 of 40 CFR part 51, appendix M, or use one of the protocols in §63.3544 of the final rule to measure capture efficiency. If you have a PTE, apply and dry all the materials within the PTE and route all exhaust gases from the enclosure to a control device, then you may

assume 100 percent capture.

To determine the emissions reduction efficiency of the control device, you must conduct measurements of the inlet and outlet gas streams. The test must consist of three runs, each run lasting at least 1 hour, using the following EPA Methods in 40 CFR part 60, appendix A:

- Method 1 or 1A for selection of the sampling sites.
- Method 2, 2A, 2C, 2D, 2F, or 2G to determine the gas volumetric flow rate.
- Method 3, 3A, or 3B for gas analysis to determine dry molecular weight. You may also use as an alternative to Method 3B, the manual method for measuring the oxygen, carbon dioxide, and carbon monoxide content of exhaust gas in ANSI/ASME PTC 19.10-1981.
- Method 4 to determine stack moisture.
- Method 25 or 25A to determine organic volatile matter concentration.

Alternatively, any other test method or data that have been validated according to the applicable procedures in Method 301 of 40 CFR part 63, appendix A, and approved by the Administrator could be used.

If you use a solvent recovery system, you may

determine the overall control efficiency using a liquid-liquid material balance instead of conducting an initial performance test. If you use the material balance alternative, you are required to measure the amount of all materials used in the affected source during each month of the initial compliance period and determine the volatile matter contained in these materials. You must also measure the amount of volatile matter recovered by the solvent recovery system each month of the initial compliance period. Then, you must compare the amount recovered to the amount used to determine the overall control efficiency and apply this efficiency to the ratio of organic HAP to coating solids for the materials used. You must record the calculations and results and include them in your Notification of Compliance Status.

Operating Limits. As mentioned above, you must establish operating limits as part of the initial performance test of an emission capture and control system. The operating limits are the values of certain parameters measured for capture systems and control devices during the most recent performance test that demonstrated compliance with the emission limits. The final rule specifies the parameters to monitor for the

types of emission control systems commonly used in the industry. Table 4 to the final rule summarizes the monitoring requirements for each type of control device.

You are required to install, calibrate, maintain, and continuously operate all monitoring equipment according to the manufacturer's specifications and ensure that the CPMS meet the requirements in §63.3547 of the final rule. If you use control devices other than those identified in the final rule, you must submit the operating parameters to be monitored to the Administrator for approval. The authority to approve the parameters to be monitored is retained by EPA and is not delegated to States.

Work Practice Standards. If you use a capture system and control device for compliance, you are required to develop and implement on an ongoing basis a work practice plan for minimizing organic HAP emissions from storage, mixing, material handling, and waste handling operations. That plan must include a description of all steps taken to minimize emissions from those sources (e.g., using closed storage containers, implementing practices to minimize emissions during filling and transfer of contents from containers, using

spill minimization techniques, etc.)). You must make the plan available for inspection if the Administrator requests to see it.

Operations during Startup, Shutdown, or Malfunction.

You are required to develop and operate your capture system and control device according to an SSMP during periods of SSM of the capture system and control device.

E. What are the continuous compliance provisions?

Emission Limits. Option 1: Compliance Based on the Compliant Material Option. If you demonstrate compliance with the final emission limits based on the compliant material option, you will demonstrate continuous compliance if, for each 12-month compliance period, the organic HAP content of each coating used does not exceed the applicable emission limit and you use no thinner that contains organic HAP.

Option 2: Compliance Based on the Emission Rate without Add-on Controls Option. If you demonstrate compliance with the final emission limits based on the emission rate without add-on controls option, you will demonstrate continuous compliance if, for each rolling 12-month compliance period, the ratio of organic HAP in all coatings and thinners in each coating type segment to

coating solids in that coating type segment is less than or equal to the applicable emission limit. You follow the same procedures for calculating the organic HAP to coating solids ratio that you used for the initial compliance period. If you use an alternative calculated overall HAP emission limit for all coating type segments within a subcategory, you use the same procedures that you used for the initial compliance period. Whichever approach you use must be used consistently throughout each 12-month compliance period.

Option 3: Compliance Based on the Emission Rate with Add-on Controls Option. For each coating operation on which you use a capture system and control device other than a solvent recovery system for which you conduct a liquid-liquid material balance, you must use the continuous parameter monitoring results for the month in determining the mass of organic HAP emissions. If the monitoring results indicate no deviations from the operating limits and there were no bypasses of the control device, you would assume the capture system and control device are achieving the same percent emissions reduction efficiency as they did during the most recent performance test in which compliance was demonstrated.

You would then apply that percent reduction to the total mass of organic HAP in materials used in controlled coating operations to determine the monthly emission rate from those operations. If there were any deviations from the operating limits during the month or any bypasses of the control device, you must account for them in the calculation of the monthly emission rate by assuming the capture system and control device were achieving zero emissions reduction during the periods of deviation, unless you have other data indicating the actual efficiency of the emission capture system and add-on control device, and the use of these data is approved by the Administrator. Then, you would determine the annual average emission rate by calculating the ratio for the most recent 12-month period.

For each coating operation on which you use a solvent recovery system and conduct a liquid-liquid material balance each month, you will use the liquid-liquid material balance to determine control efficiency. To determine the overall control efficiency, you must measure the amount of all materials used during each month and determine the volatile matter content of these materials. You must also measure the amount of volatile

matter recovered by the solvent recovery system during the month, calculate the overall control efficiency, and apply it to the total mass of organic HAP in the materials used to determine total organic HAP emissions. Then, you would determine the annual average emission rate by taking the average of the monthly ratios for the most recent 12-month period.

Operating Limits. If you use a capture system and control device, the final rule requires you to achieve on a continuous basis the operating limits you establish during the performance test. If the continuous monitoring shows that the capture system and control device are operating outside the range of values established during the performance test, you have deviated from the established operating limits.

If you operate a capture system and control device that allow emissions to bypass the control device, you must monitor for potential bypass of the control device to demonstrate that organic HAP emissions from each emission point within the affected source are being routed to the control device. You may choose from the following four monitoring procedures:

- Flow control position indicator to provide a

record of whether the exhaust stream is directed to the control device.

- Car-seal or lock-and-key valve closures to secure the bypass line valve in the closed position when the control device is operating.

- Valve closure continuous monitoring to ensure that any bypass line valve or damper is closed when the control device is operating.

- Automatic shutdown system to stop the coating operation when flow is diverted from the control device.

If the bypass monitoring procedures indicate that emissions are not routed to the control device, you have deviated from your monitoring plan.

Work Practice Standards. If you use an emission capture system and control device for compliance, you are required to implement on an ongoing basis the work practice plan you developed during the initial compliance period. If you did not develop a plan for reducing organic HAP emissions or you do not implement the plan, this would be a deviation from the work practice standards.

Operations During Startup, Shutdown, or Malfunction.

If you use a capture system and control device for compliance, you are required to develop and operate according to an SSMP during periods of SSM of the capture system and control device.

Option 4: Compliance Based on the Control Efficiency/Outlet Concentration Option. If you use a capture system and add-on control device other than a solvent recovery system for which you conduct a liquid-liquid material balance, your testing and continuous compliance requirements are the same as those in option 3. For add-on control systems, you are required to install control device parameter monitoring equipment to be used to demonstrate compliance with the operating requirements for add-on control systems in the final rule. If you operate a CPMS, it has to collect data at least every 15 minutes, and you must have at least three data points per hour to have a valid hour of data. You must operate the CPMS at all times that the surface coating operation and control systems are operating. You also must conduct proper maintenance of the CPMS and maintain an inventory of necessary parts for routine repairs of the CPMS. Using the data collected with the CPMS, you must calculate and record the average values of

each operating parameter according to the specified averaging times.

F. What are the notification, recordkeeping, and reporting requirements?

You are required to comply with the applicable requirements in the NESHAP General Provisions, subpart A of 40 CFR part 63, as described in the final rule. The General Provisions notification requirements include initial notifications, notification of performance test if you are complying using a capture system and control device, notification of compliance status, and additional notifications required for affected sources with continuous monitoring systems. The General Provisions also require certain records and periodic reports.

Initial Notification. If the final standards apply to you as a new or reconstructed affected source, you must send a notification to the EPA Regional Office in the Region where your facility is located and to your State agency within 120 days after the date of initial startup or 120 days after publication of the final rule, whichever is later. Existing affected sources must send the Initial Notification within 1 year after publication of the final rule. The report notifies us and your State

agency that you have constructed a new facility, reconstructed an existing facility, or have an existing facility that is subject to the final rule. Thus, it allows you and the permitting authority to plan for compliance activities. You also need to send a notification of planned construction or reconstruction of a source that would be subject to the final rule and apply for approval to construct or reconstruct.

Notification of Performance Test. If you demonstrate compliance by using a capture system and control device for which you do not conduct a liquid-liquid material balance, you must conduct a performance test. For a new or reconstructed affected source, the performance test must take place no later than 180 days after initial startup or 180 days after publication of the final rule, whichever is later. For an existing source, you must conduct the performance test no later than the compliance date. You must notify us (or the delegated State or local agency) at least 60 calendar days before the performance test is scheduled to begin, as indicated in the General Provisions for the NESHAP.

Notification of Compliance Status. Your compliance procedures depend on which compliance option you choose.

For each compliance option, you must send us a Notification of Compliance Status within 30 days of the end of the initial compliance period. In the notification, you must certify whether the affected source has complied with the final standards, identify the option(s) you used to demonstrate initial compliance, summarize the data and calculations supporting the compliance demonstration, and describe how you will determine continuous compliance.

If you elect to comply by using a capture system and control device for which you conduct performance tests, you must provide the results of the tests. Your notification must also include the measured range of each monitored parameter, the operating limits established during the performance test, and information showing whether the affected source complied with its operating limits during the initial compliance period.

Recordkeeping Requirements. You are required to keep for 5 years records of reported information and all other information necessary to document compliance with the final rule. As required under the General Provisions, records for the 2 most recent years must be kept onsite; records for the other 3 years may be kept

offsite. Records pertaining to the design and operation of control and monitoring equipment must be kept for the life of the equipment.

Depending on the compliance option that you choose, you must keep records of the following:

- Organic HAP content, volatile matter content, coating solids content, and quantity of the coatings and other materials applied.

- All documentation supporting Initial Notifications and Notifications of Compliance Status.

If you demonstrate compliance by using a capture system and control device, you also need to keep records of the following:

- The occurrence and duration of each SSM of the emission capture system and control device.

- All maintenance performed on the capture system and control device.

- Actions taken during SSM that are different from the procedures specified in the affected source's SSMP.

- All information necessary to demonstrate conformance with the affected source's SSMP when the plan procedures are followed.

- All information necessary to demonstrate

conformance

with the affected source's plan for minimizing emissions from mixing, storage, and waste handling operations.

- Each period during which a CPMS is malfunctioning or inoperative (including out-of-control periods).

- All required measurements needed to demonstrate compliance with the standards.

- All results of performance tests.

The final rule requires you to collect and keep records according to your monitoring plan. Failure to collect and keep the specified minimum data is a deviation that is separate from deviations from emission limits, operating limits, or work practice standards.

Deviations, as determined from those records, must be recorded and also reported. A deviation is any instance when any requirement or obligation established by the final rule including, but not limited to, the emission limits, operating limits, and work practice standards, is not met.

If you use a capture system and control device to reduce organic HAP emissions, you must make your SSMP available for inspection if the Administrator requests to

see it. The plan must stay in your records for the life of the affected source or until the affected source is no longer subject to the final standards. If you revise the plan, you need to keep the previous superceded versions on record for 5 years following the revision.

Periodic Reports. Each year is divided into two semiannual reporting periods. If no deviations occur during a semiannual reporting period, you must submit a semiannual report stating that the affected source has been in continuous compliance. If deviations occur, you must include them in the report as follows:

- Report each deviation from the emission limit.
- If you use an emission capture system and control device, report each deviation from the work practice standards.
- If you use an emission capture system and control device, report each deviation from an operating limit and report each time a bypass line diverts emissions from the control device to the atmosphere.
- Report other specific information on the periods of time and details of deviations that occurred.

You must also include an explanation in each semiannual report if a change occurs that might affect

the compliance status of the affected source or if you change to another option for meeting the applicable emission limit.

Other Reports. You are required to submit reports for periods of SSM of the capture system and control device. If the procedures you follow during any SSM are inconsistent with your plan, you must report those procedures in immediate reports required by the General Provisions in §63.10(d)(5)(ii) and in your semiannual reports.

III. What are the significant comments and changes since proposal?

Refer to the BID ("National Emission Standards for Hazardous Air Pollutants: Surface Coating of Metal Cans Background Information for Final Standards - Summary of Public Comments and Responses," August 2003, EPA-453/R-03-009), for EPA's responses to each public comment; available in Docket No. OAR-2003-0005 (formerly Docket No. A-98-41).

A. End Coatings - Repair Spray Coatings

Comment: Two commenters stated that post-coat repair spray for easy-open ends was not covered by the proposed rule. The commenters stated that the proper

classification of repair spray under the proposed NESHAP could be complicated by the various ways in which it is regulated under current State standards for reducing volatile organic compounds. The commenters recommended that EPA establish a specific emission limit for this type of coating, which has the potential for more use in the future because of increasing customer demand for easy-open ends.

Response: Using the coatings data and information provided by the commenters, we have added a separate emission limit for repair spray coatings under the end coating subcategory (formerly called end lining) in the final rule. As indicated by the name, repair spray coatings are used to cover breaks in the coating that are caused during the formation of the score in easy-open ends or to provide, after the manufacturing process, an additional protective layer for corrosion resistance. The emission limit in the final rule for repair spray coatings is 2.06 kilograms (kg) HAP/liter solids (17.17 lb HAP/gal solids) for existing affected sources and 0.64 kg HAP/liter solids (5.34 lb HAP/gal solids) for new affected sources. We also included a definition for "repair spray" in the definitions section of the final

rule.

B. Affected Source Clarification

Comment: Some commenters expressed confusion regarding how we defined "affected source" and "new affected source" in the proposed rule.

Response: In §63.3482(b) of the final rule, an affected source is defined as the collection of all coating operations used for surface coating of metal cans or ends (including decorative tins) or metal crowns or closures. Section 63.3482(c) also states that an affected source is a new affected source if you commenced its construction after May 28, 2002 (proposal date) and the construction is of a completely new metal can surface coating source where previously no metal can surface coating source had existed. Based on the definition of "reconstruction," adding capacity to an existing source with a new coating line would not trigger reconstruction, but replacing an old line with a new line could trigger reconstruction if the cost criteria for replacing equipment are met (meeting or exceeding the cost criteria is more likely for smaller sources). The General Provisions define "reconstruction" in terms of a "comparable new source." If the existing facility has

multiple coating lines as part of its affected source, it is unlikely that adding a single coating line to replace an old one would cost more than 50 percent of the fixed capital cost that would be required to construct a comparable new source.

We have also clarified that the final rule applies to affected sources that use at least 5,700 liters (1,500 gal) of coatings per year. This means that the coating usage limit applies to the entire source rather than to each subcategory.

C. Monitoring, Recordkeeping, and Reporting Costs

Comment: The main industry trade association disagreed with the estimated costs of the proposed rule. The association estimated that the initial years 1 to 3 industrywide monitoring, recordkeeping, and reporting (MRR) compliance costs would total \$7,068,854, which is \$5,431,678 more than the EPA estimate. Also, it estimated that the average annualized industrywide MRR costs per year for year 4 and beyond would be \$10,674,080, which is \$3,190,207 per year more than EPA's estimate.

Response: We have changed the information collection request (ICR) cost estimates for each facility

to include recalculated estimates for the amount of time associated with reading, interpreting, and summarizing regulations; rereading the regulation on a continuing basis as questions of interpretation arise during the time facilities are planning and preparing for compliance; securing outside legal and consultant services related to regulatory review and interpretation; and covering recurrent labor costs for reviewing the regulation.

We have increased the cost estimates for computer equipment and software to include upgrades for larger facilities, as well as initial computer purchases for smaller facilities. The initial estimates included a cost of \$2,000 for the initial purchase for smaller facilities. The final rule includes a cost of computer equipment and software of \$3,500 (per facility) for all facilities.

We have adjusted our monitoring equipment costs for add-on control devices to include installation costs, equipment costs for PTE, and costs for monitoring software. We have updated our monitoring cost estimates to include a total of \$19,500 per facility instead of \$4,000 per facility.

We have included regenerative thermal oxidizer (RTO) operation and maintenance costs because they were inadvertently excluded from the previous calculations. Assuming that operating time will require 30 minutes per shift and equipment maintenance will require 1 hour per week, the overall RTO capital equipment costs increase by \$1.38 million.

The cost estimate as proposed used 1999 labor rates, and the current analysis uses 2001 labor rates for the metal can industry. The costs for labor requirements, computer equipment, monitoring equipment for add-on control devices, installation for the monitoring equipment, and operation and maintenance of recordkeeping and reporting are \$6,823,709 for years 1 through 3 and \$8,367,800 per year for year 4 and beyond.

D. Performance Test Costs

Comment: One commenter stated that the costs of performance tests were not properly accounted for in the ICR because EPA assumed the costs for performance testing would be amortized over 5 years. The commenter stated the costs of performance tests are more likely to be, on average, \$25,000 per facility which would result in a total industry cost of \$3,050,000, incurred and expended

in year 3, compared with EPA's annualized cost estimate for performance tests of \$1,147,000.

Response: We estimated the initial cost of performance testing on a control device basis. Therefore, a typical metal can surface coating facility would incur costs of \$38,400 ($\$19,200 \times 2$) because there are an average of two control devices per facility in the database. Our estimated costs remain valid. However, we agree with the commenter that the initial performance testing is most likely to be conducted in the third year after promulgation to ensure compliance with the final rule requirements, and we adjusted the appropriate cost estimated in the ICR to reflect this.

E. Calculation of Organic HAP Emission Reduction

As part of a compliance demonstration, an owner or operator of an affected source has to calculate the organic HAP emission reduction for operations with add-on capture and control systems. The equation used to calculate the emission reduction achieved with such systems in the proposed rule decreased the overall control efficiency to account for time periods when there were deviations. Using time periods alone to account for periods of deviations assumes essentially steady-state

operations over the compliance period, with little variation in the quantity of coating materials used or their HAP content. While steady-state conditions may occur at some operations, others may use different quantities of coating materials or materials with different HAP content. To allow flexibility for operations that could vary over time, we have revised the equation to determine overall control efficiency.

The terms associated with the total time period of deviations (T_{dev}) and coating operations (T_{op}) that were in the proposed Equation 1 do not appear in Equation 1 of §63.3541 of the final rule. Instead, Equation 1 of the final rule includes a term H_{unc} to represent the total mass (kg) of organic HAP in the coatings, thinners, and cleaning materials used during periods of deviations. In addition, the final rule allows a source to demonstrate that some level of control efficiency may be achieved during periods of deviations (i.e., the efficiency of emission reduction is not necessarily zero during malfunctions) by showing sufficient supporting information. Two additional equations related to Equation 1 have been included to calculate total mass of organic HAP in cleaning materials and total mass of

organic HAP used during periods of deviations.

IV. Summary of Environmental, Energy, and Economic Impacts

The final rule will affect 142 existing major source metal can surface coating facilities. The impacts are presented relative to a baseline reflecting the level of control prior to the final rule. Because of consolidation in the metal can surface coating industry, we do not expect there to be any net growth within the industry in the next 5 years. Therefore, the estimate of the impacts of the final rule is presented for existing facilities only. For a facility that would already be in compliance with the emission limits in the final rule, only MRR cost impacts were estimated. For more information on how impacts were estimated, see the BID for the final rule (EPA-453/R-03-009).

A. What are the air impacts?

We estimated that compliance with the emission limits in the final rule will reduce nationwide organic HAP emissions from existing major affected sources by approximately 6,160 Mg/yr (6,800 tpy). That represents a reduction of 70 percent from the baseline organic HAP emissions of 8,700 Mg/yr (9,600 tpy). Table 5 of this

preamble gives a summary of the primary air impacts for major coating segment groupings associated with implementation of the final rule.

Table 5. Summary of Primary Air Impacts by Subcategory or Coating Segment for Existing Sources

Subcategory or coating segment	Emissions before NESHAP, Mg/yr (tpy)	Emissions after NESHAP, Mg/yr (tpy)	Emissions reduction, Mg/yr (tpy)	Percent reduction
Two-piece D&I beverage can body coating	4,468 (4,922)	1,644 (1,811)	2,824 (3,111)	63
Two-piece D&I food can body coating	765 (843)	139 (153)	626 (690)	82
One-piece D&I aerosol can body coating	16 (18)	16 (18)	0 (0)	0
Sheetcoating	2,289 (2,522)	404 (445)	1,885 (2,077)	82
Three-piece food can assembly coating	370 (408)	285 (314)	85 (94)	23
Three-piece nonfood can assembly coating	45 (50)	38 (42)	6 (7)	14
End coating	763 (841)	34 (38)	729 (803)	95
Total	8,718 (9,603)	2,560 (2,820)	6,158 (6,783)	70

B. What are the cost impacts?

Cost impacts include the costs of recordkeeping and reporting, capital equipment costs, performance testing costs, monitoring equipment costs, and material costs as facilities comply with the final rule. Recordkeeping and reporting include all labor hours related to the tracking of coating usage, the cost of purchasing computer equipment, the labor hours required to write and submit reports, and the labor hours required to train personnel. Capital equipment costs for the facilities that choose to use capture equipment and add-on control devices to comply with the final rule include costs for the purchase, installation, and operation of the equipment. Performance testing costs for the facilities that choose to use add-on control devices to comply with the final standards include the labor hours required for a contractor to conduct performance testing on each control device used, and to develop the associated reports for recordkeeping and reporting purposes. Monitoring equipment costs include the purchase of thermocouples, pressure sensors, and data loggers and the installation of equipment.

Material costs include the cost of switching to low-

or no-HAP coatings. For facilities that choose to use low- or no-HAP coatings to comply with the final standards, coatings with lower-HAP content are assumed to be more expensive than coatings with higher-HAP content. According to information received from industry, we assumed the incremental cost increase to be \$2.00 per gal for inside sprays and \$5.00 per gal for side seam stripes, which are used in three-piece food can assembly and three-piece nonfood can assembly subcategories; and \$2.00 per gal for nonaseptic end seal compounds, which are used in the end coating subcategory. These incremental costs are the estimated additional costs that each facility would incur, rather than the total material investment.

We estimate the total annualized costs for compliance with the final rule to be \$58.7 million. Those estimates include \$8.4 million for MRR requirements, \$4.1 million for coating material costs, and \$46.2 million for capital equipment.

C. What are the economic impacts?

We prepared an economic impact analysis (EIA) to provide an estimate of the facility and market impacts of the final rule, as well as the social costs. The goal of

the EIA was to estimate the market response of the metal can coating and production facilities to the final rule and to determine the economic impacts. Compliance costs are associated with chemical substitution during the coating process, the installation of pollution control equipment, and recordkeeping and reporting activities. We estimate the total annualized compliance costs to be \$58.7 million per year divided across 142 major source facilities (owned by 30 companies).

In terms of industry impacts, metal can producers could experience a total projected decrease of \$16.4 million in pretax earnings, which reflects the compliance costs associated with the production of metal cans and the resulting reductions in revenues due to the increase in the prices of the directly affected product markets and reduced quantities purchased. Through the market impacts described above, the final rule is expected to create both gainers and losers within the metal can industry. Approximately one-third of the modeled facilities may experience an increase in pretax earnings as a result of price increases that exceed their compliance costs per unit. In contrast, the remaining two-thirds of metal can facilities may experience losses

in pretax earnings. In addition, the EIA indicates that none of the facilities within the metal can market are at risk of closure because of the final rule. We project overall employment to decrease by 242 employees, or 1.0 percent, as a result of the final rule.

Based on the market analysis, we project the total social cost of the final rule to be \$55.7 million. The estimated social costs differ slightly from the projected engineering costs because social costs account for producer and consumer behavior. Consumers are projected to bear \$34.6 million or 60 percent of the total social costs of the final rule. Producers could bear \$21.6 million, or 40 percent of the total social costs. For more information, consult the EIA report supporting the final rule.

D. What are the non-air health, environmental, and energy impacts?

Based on information from the industry survey responses, we found no indication that the use of low- or no-organic-HAP content coatings and thinners at existing sources would result in any increase or decrease in non-air health, environmental, and energy impacts. There will be no change in utility requirements associated with

the use of these materials, so there will be no change in the amount of energy consumed as a result of the material conversion. Also, there will be no significant change in the amount of materials used or the amount of waste produced.

Many facilities in the draw and iron (D&I) can body coating and sheetcoating subcategories currently use add-on emission control devices to meet existing requirements; consequently, we anticipate that facilities in those subcategories will use add-on controls to comply with the final rule. Secondary air and energy impacts will result from fuel combustion needed to operate these control devices, which are expected to be RTO.

The RTO require electricity and the combustion of natural gas to operate and maintain operating temperatures. The electricity costs of using RTO are included in the capital expenditures. By-products of fuel combustion required to generate electricity and maintain RTO operating temperature include emission of carbon monoxide, nitrogen oxides, sulfur dioxide, and particulate matter less than 10 microns in diameter. Assuming the electricity required for RTO operation is generated at coal-fired plants built since 1978 and using

air pollution emissions factors, we estimate that generation of electricity required to operate RTO at all affected D&I can body coating and sheetcoating facilities will result in increases in the following air pollutants: carbon monoxide, 35 tpy; nitrogen oxides, 156 tpy; sulfur dioxide, 775 tpy; and particulate matter, 70 tpy.

Energy impacts include the consumption of electricity and natural gas needed to operate RTO. We estimate that electricity consumption from the operation of RTO at all D&I can body coating and sheetcoating facilities will increase by 34,500,000 kilowatt hours per year, and fuel energy consumption resulting from burning natural gas will increase by 672,300 million British thermal units per year. We estimate that no significant secondary water or solid waste impacts will result from the operation of emission control devices.

E. Potential Changes to the Impacts

The outcome of two delisting petitions that have been submitted to EPA could significantly affect the estimated impacts of the final rule. These petitions are the petition to delist EGBE from the HAP list and the petition to delist the two-piece beverage can segment from the source category list. Both petitions are being

reviewed by EPA. If granted, the delisting of either EGBE or the two-piece beverage can segment could significantly decrease the number of sources affected by the final rule and could affect the final emission limits. Thus, the estimated impacts could change. Once decisions on the petitions are made, we will expeditiously determine whether changes to the final rule are warranted. If changes are appropriate, EPA will take prompt action to issue such changes and to ensure that facilities do not incur unnecessary compliance expenses. The EPA will also work with affected facilities to ensure that they are not subject to inappropriate sanctions.

V. Statutory and Executive Order Reviews

A. Executive Order 12866: Regulatory Planning and Review

Under Executive Order 12866 (58 FR 51735, October 4, 1993), EPA must determine whether the regulatory action is "significant" and, therefore subject to Office of Management and Budget (OMB) review and the requirements of the Executive Order. The Executive Order defines "significant regulatory action" as one that is likely to result in a rule that may:

- (1) Have an annual effect on the economy of \$100

million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities;

(2) create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;

(3) materially alter the budgetary impact of entitlements, grants, user fees, or loan programs, or the rights and obligation of recipients thereof; or

(4) raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

It has been determined that the final rule is not a "significant regulatory action" under the terms of Executive Order 12866 and is, therefore, not subject to OMB review.

B. Paperwork Reduction Act

The information collection requirements in the final rule have been submitted for approval to OMB under the Paperwork Reduction Act, 44 U.S.C. 3501, et seq. The information collection requirements are not enforceable

until OMB approves them.

The information requirements are based on notification, recordkeeping, and reporting requirements in the NESHAP General Provisions (40 CFR part 63, subpart A) which are mandatory for all operators subject to national emission standards. Those recordkeeping and reporting requirements are specifically authorized by section 114 of the CAA (42 U.S.C. 7414). All information submitted to EPA pursuant to the recordkeeping and reporting requirements for which a claim of confidentiality is made is safeguarded according to EPA policies set forth in 40 CFR part 2, subpart B.

The final rule requires maintaining records of all coating and thinning materials data and calculations used to determine compliance. This information includes the amount (kg) used during each 12-month compliance period, mass fraction organic HAP, and, for coating materials only, mass fraction of solids.

If an add-on control device is used, records must be kept of the capture efficiency of the capture system, destruction or removal efficiency of the add-on control device, and the monitored operating parameters. In addition, records must be kept of each calculation of the

affected sourcewide emissions for each monthly and rolling 12-month compliance period and all data, calculations, test results, and other supporting information used to determine this value. The recordkeeping requirements are only for the specific information needed to determine compliance.

The MRR burden for this collection (averaged over the first 3 years after the effective date of the promulgated rule) is estimated to be approximately 7,815 labor hours per year at a total annual cost of \$2.27 million. That estimate includes reviewing the regulation, conducting a one-time performance test (with repeat tests where needed), and submitting the report(s); one-time submission of a SSMP with semiannual reports for any event when the procedures in the plan were not followed; semiannual compliance status reports; and recordkeeping.

Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting,

validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

An agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's rules are listed in 40 CFR part 9. When this ICR is approved by OMB, the EPA will publish a technical amendment to 40 CFR part 9 in the Federal Register to display the OMB control number for the approved information collection requirements contained in the final rule.

C. Regulatory Flexibility Act

The EPA has determined that it is not necessary to prepare a regulatory flexibility analysis in connection with the final rule. The EPA has also determined that the final rule will not have a significant economic impact on a substantial number of small entities. For

the purposes of assessing the impacts of today's final rule on small entities, small entity is defined as: (1) a small business according to the Small Business Administration (SBA) size standards by NAICS code ranging from 500 to 1,000 employees; (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

After considering the economic impact of today's final rule on small entities, EPA has concluded that the final rule will not have a significant economic impact on a substantial number of small entities. Based on SBA NAICS-based size definitions and reported sales and employment data, we identified 13 small business, or 43.3 percent of the metal can companies. Small businesses are expected to incur 2 percent of the total industry annualized compliance costs of \$58.7 million. We estimate that 10 of the 13 small businesses may experience an impact below 1 percent of total company sales, two small firms may experience impacts between 1

and 3 percent, and one firm may experience an impact above 3 percent of sales. For more information, consult the EIA report entitled "Economic Impact Analysis for the Final Metal Can NESHAP" in Docket No. OAR-2003-0005 (formerly Docket No. A-98-41).

Although the final rule will not have a significant economic impact on a substantial number of small entities, EPA nonetheless has tried to reduce the impact of the final rule on small entities. Small entities will be afforded extensive flexibility in demonstrating compliance through pollution prevention rather than the use of add-on control technology. We included compliance options that give small entities flexibility in choosing the most cost effective and least burdensome alternative for their operation. For example, a facility could purchase and use low-HAP coatings and other materials (i.e., pollution prevention) that meet the final standards instead of using add-on capture and control systems. This method of compliance can be demonstrated with minimum burden by using purchase and usage records. No testing of materials would be required as facility owners could show that their coatings and other materials meet the emission limits by providing formulation data

supplied by the manufacturer.

D. Unfunded Mandates Reform Act

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104-4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and tribal governments and the private sector. Under Section 202 of the UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with "Federal mandates" that may result in expenditures to State, local, and tribal governments, in aggregate, or to the private sector, of \$100 million or more in any 1 year. Before promulgating an EPA rule for which a written statement is needed, section 205 of the UMRA generally requires EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective, or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows EPA to adopt an alternative other than the least costly, most cost-effective, or least burdensome alternative if the Administrator

publishes with the final rule an explanation why that alternative was not adopted. Before EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, it must have developed under section 203 of the UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of EPA regulatory proposals with significant Federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

The EPA has determined that the final rule does not contain a Federal mandate that may result in expenditures of \$100 million or more for State, local, and tribal governments, in the aggregate, or the private sector in any 1 year. The maximum total annualized cost of the final rule for any year has been estimated to be less than \$58.7 million. Thus, today's final rule is not subject to the requirements of sections 202 and 205 of the UMRA. In addition, the EPA has determined that the final rule contains no regulatory requirements that might

significantly or uniquely affect small governments because it contains no requirements that apply to such governments or impose obligations upon them. Therefore, today's final rule is not subject to the requirements of section 203 of UMRA.

E. Executive Order 13132: Federalism

Executive Order 13132 (64 FR 43255, August 10, 1999) requires EPA to develop an accountable process to ensure "meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications." "Policies that have federalism implications" is defined in the Executive Order to include rules that have "substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government."

The final rule does not have federalism implications. It will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. The final rule does not have a significant

Federal intergovernmental mandate within the meaning of section 202 of UMRA, and it will not result in costs to small governments that are equal to, or greater than, 1 percent of revenue. Thus, Executive Order 13132 does not apply to the final rule.

In the spirit of Executive Order 13132, and consistent with EPA policy to promote communications between EPA and State and local governments, EPA specifically solicited comment on the proposed rule from State and local officials. A summary of the comments received from two State agencies and EPA's responses to those comments is provided in sections 2.1, 2.5, 2.6, 2.7, and 2.10 of the promulgation BID (EPA-453/R-03-009).

F. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments

Executive Order 13175 (65 FR 67249, November 9, 2000) requires EPA to develop an accountable process to ensure "meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications." The final rule does not have tribal implications, as specified in Executive Order 13175. No tribal governments own or operate metal can surface coating operations. Thus, Executive Order 13175

does not apply to the final rule.

G. Executive Order 13045: Protection of Children from Environmental Health & Safety Risks

Executive Order 13045 (62 FR 19885, April 23, 1997) applies to any rule that: (1) is determined to be "economically significant" as defined under Executive Order 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, EPA must evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency.

The EPA interprets Executive Order 13045 as applying only to those regulatory actions that are based on health or safety risks, such that the analysis required under section 5-501 of the Executive Order has the potential to influence the regulation. The final rule is not subject to Executive Order 13045 because it is not economically significant, and it is based on technology performance and not on health or safety risks.

H. Executive Order 13211: Actions Concerning Regulations that Significantly Affect Energy Supply, Distribution, or Use

The final rule is not subject to Executive Order 13211 (66 FR 28355, May 22, 2001) because it is not a significant regulatory action under Executive Order 12866.

I. National Technology Transfer and Advancement Act

The National Technology Transfer and Advancement Act (NTTAA) of 1995 (Public Law No. 104-113, §12(d) (15 U.S.C. 272 note) directs the EPA to use voluntary consensus standards (VCS) in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. The VCS are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by VCS bodies. The NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable VCS.

The final rule includes the following standards: EPA Methods 1, 1A, 2, 2A, 2C, 2D, 2F, 2G, 3, 3A, 3B, 4, 24, 25, 25A, 204, 204A through F, and 311. Consistent with the NTTAA, EPA conducted searches to identify VCS in

addition to these EPA methods/performance specifications. No applicable VCS were identified for EPA Methods 1A, 2A, 2D, 2F, 2G, 204, 204A through 204F, and 311. The search and review results have been documented and are placed in the docket (Docket No. OAR-2003-0005, formerly Docket No. A-98-41) of the final rule.

Three VCS described below were identified as acceptable alternatives to EPA test methods for the purposes of the final rule.

The VCS ANSI/ASME PTC 19.10-1981, "Flue and Exhaust Gas Analyses [Part 10, Instruments and Apparatus]," is cited in the final rule for its manual method for measuring the oxygen, carbon dioxide, and carbon monoxide content of exhaust gas. That part of ANSI/ASME PTC 19.10-1981, Part 10, is an acceptable alternative to Method 3B.

The two VCS, ASTM D2697-86 (Reapproved 1998), "Standard Test Method for Volume Nonvolatile Matter in Clear or Pigmented Coatings," and ASTM D6093-97, "Standard Test Method for Percent Volume Nonvolatile Matter in Clear or Pigmented Coatings Using a Helium Gas Pycnometer," are cited in the final rule as acceptable alternatives to EPA Method 24 to determine the volume

fraction of coating solids. Currently, EPA Method 24 does not have a procedure for determining the volume of solids in coatings. Those VCS augment the procedures in Method 24, which currently states that volume solids content be calculated from the coating manufacturer's formulation.

Six VCS: ASTM D1475-90, ASTM D2369-95, ASTM D3792-91, ASTM D4017-96a, ASTM D4457-85 (Reapproved 91), and ASTM D5403-93 are already incorporated by reference (IBR) in EPA Method 24. Five VCS: ASTM D1979-91, ASTM D3432-89, ASTM D4747-87, ASTM D4827-93, and ASTM PS9-94 are IBR in EPA Method 311.

In addition to the VCS the EPA uses in the final rule, the search for emissions measurement procedures identified 14 other VCS. The EPA determined that 11 of the 14 VCS identified for measuring emissions of the HAP or surrogates subject to emission standards in the final rule were impractical alternatives to EPA test methods for the purposes of the final rule. Therefore, EPA does not intend to adopt those VCS for that purpose. (See Docket No. OAR-2003-0005, formerly Docket No. A-98-41, for further information on the methods.)

Three of the 14 VCS identified in the search were

not available at the time the review was conducted for the purposes of the final rule because they are under development by a VCS body: ASME/BSR MFC 13M, "Flow Measurement by Velocity Traverse," for EPA Method 2 (and possibly 1); ASME/BSR MFC 12M, "Flow in Closed Conduits Using Multiport Averaging Pitot Primary Flowmeters," for EPA Method 2; and ISO/CD 17895, "Paints and Varnishes - Determination of the Volatile Organic Compound Content of Water-based Emulsion Paints," for EPA Method 24.

Listed in §§63.3521, 63.3531, 63.3541, 63.3543, 63.3544, 63.3545, 63.3551, 63.3553, 63.3554, and 63.3555 of the final rule are the EPA testing methods. Under 40 CFR 63.7(f) and 63.8(f) of subpart A of the General Provisions, a source may apply to EPA for permission to use alternative test methods or alternative monitoring requirements in place of any of the EPA testing methods, performance specifications, or procedures.

J. Congressional Review Act

The Congressional Review Act, 5 U.S.C. §801, et seq., as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy

of the rule, to each House of the Congress and to the Comptroller General of the United States. The EPA will submit a report containing the final rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the final rule in the Federal Register. A major rule cannot take effect until 60 days after it is published in the Federal Register. This action is not a "major rule" as defined by 5 U.S.C. §804(2). The final rule will be effective [INSERT DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER].

List of Subjects in 40 CFR Part 63

Environmental protection, Administrative practice and procedure, Air pollution control, Hazardous substances,
Incorporation by reference, Intergovernmental relations, Reporting and recordkeeping requirements.

Dated: August 14, 2003.

Marianne Lamont Horinko

Acting Administrator.

For the reasons stated in the preamble, title 40, chapter I, part 63 of the Code of Federal Regulations is amended as follows:

PART 63--[AMENDED]

1. The authority citation for part 63 continues to read as follows:

Authority: 42 U.S.C. 7401, et seq.

2. Section 63.14 is amended by revising paragraphs (b)(24) and (25) and (i)(3) to read as follows:

§63.14 Incorporations by reference.

* * * * *

(b) * * *

(24) ASTM D2697-86 (Reapproved 1998), "Standard Test Method for Volume Nonvolatile Matter in Clear or Pigmented Coatings," IBR approved for §§63.3521(b)(1), 63.4141(b)(1), 63.4741(b)(1), 63.4941(b)(1), and 63.5160(c).

(25) ASTM D6093-97, "Standard Test Method for Percent Volume Nonvolatile Matter in Clear or Pigmented Coatings Using a Helium Gas Pycnometer," IBR approved for §§63.3521(b)(1), 63.4141(b)(1), 63.4741(b)(1), 63.4941(b)(1), and 63.5160(c).

* * * * *

(i) * * *

(3) ANSI/ASME PTC 19.10-1981, "Flue and Exhaust Gas Analyses [Part 10, Instruments and Apparatus]," IBR approved for §§63.865(b), 63.3360(e)(1)(iii), 63.3545(a)(3), 63.3555(a)(3), 63.4166(a)(3), 63.4362(a)(3), 63.4766(a)(3), 63.4965(a)(3), 63.5160(d)(1)(iii), 63.9307(c)(2), and 69.9323(a)(3).

* * * * *

3. Part 63 is amended by adding subpart KKKK to read as follows:

Subpart KKKK—National Emission Standards for Hazardous Air Pollutants: Surface Coating of Metal Cans

Sec.

What This Subpart Covers

63.3480 What is the purpose of this subpart?
 63.3481 Am I subject to this subpart?
 63.3482 What parts of my plant does this subpart cover?
 63.3483 When do I have to comply with this subpart?

Emission Limitations

63.3490 What emission limits must I meet?
 63.3491 What are my options for meeting the emission limits?
 63.3492 What operating limits must I meet?
 63.3493 What work practice standards must I meet?

General Compliance Requirements

63.3500 What are my general requirements for complying with this subpart?
 63.3501 What parts of the General Provisions apply to me?

Notifications, Reports, and Records

- 63.3510 What notifications must I submit?
- 63.3511 What reports must I submit?
- 63.3512 What records must I keep?
- 63.3513 In what form and for how long must I keep my records?

Compliance Requirements for the Compliant Material Option

- 63.3520 By what date must I conduct the initial compliance demonstration?
- 63.3521 How do I demonstrate initial compliance with the emission limitations?
- 63.3522 How do I demonstrate continuous compliance with the emission limitations?

Compliance Requirements for the Emission Rate Without Add-On Controls Option

- 63.3530 By what date must I conduct the initial compliance demonstration?
- 63.3531 How do I demonstrate initial compliance with the emission limitations?
- 63.3532 How do I demonstrate continuous compliance with the emission limitations?

Compliance Requirements for the Emission Rate With Add-On Controls Option

- 63.3540 By what date must I conduct performance tests and other initial compliance demonstrations?
- 63.3541 How do I demonstrate initial compliance?
- 63.3542 How do I demonstrate continuous compliance with the emission limitations?
- 63.3543 What are the general requirements for performance tests?
- 63.3544 How do I determine the emission capture system efficiency?
- 63.3545 How do I determine the add-on control device emission destruction or removal efficiency?
- 63.3546 How do I establish the emission capture system and add-on control device operating limits during the performance test?
- 63.3547 What are the requirements for continuous parameter monitoring system installation, operation, and maintenance?

Compliance Requirements for the Control Efficiency/Outlet Concentration Option

- 63.3550 By what date must I conduct performance tests

- and other initial compliance demonstrations?
- 63.3551 How do I demonstrate initial compliance?
- 63.3552 How do I demonstrate continuous compliance with the emission limitations?
- 63.3553 What are the general requirements for performance tests?
- 63.3554 How do I determine the emission capture system efficiency?
- 63.3555 How do I determine the outlet THC emissions and add-on control device emission destruction or removal efficiency?
- 63.3556 How do I establish the emission capture system and add-on control device operating limits during the performance test?
- 63.3557 What are the requirements for continuous parameter monitoring system installation, operation, and maintenance?

Other Requirements and Information

- 63.3560 Who implements and enforces this subpart?
- 63.3561 What definitions apply to this subpart?

Tables to Subpart KKKK of Part 63

- Table 1 to Subpart KKKK of Part 63. Emission Limits for New or Reconstructed Affected Sources
- Table 2 to Subpart KKKK of Part 63. Emission Limits for Existing Affected Sources
- Table 3 to Subpart KKKK of Part 63. Emission Limits for Affected Sources Using the Control Efficiency/Outlet Concentration Compliance Option
- Table 4 to Subpart KKKK of Part 63. Operating Limits if Using the Emission Rate with Add-on Controls Option or the Control Efficiency/Outlet Concentration Compliance Option
- Table 5 to Subpart KKKK of Part 63. Applicability of General Provisions to Subpart KKKK
- Table 6 to Subpart KKKK of Part 63. Default Organic HAP Mass Fraction for Solvents and Solvent Blends
- Table 7 to Subpart KKKK of Part 63. Default Organic HAP Mass Fraction for Petroleum Solvent Groups

Subpart KKKK-National Emission Standards for Hazardous Air Pollutants: Surface Coating of Metal Cans

What This Subpart Covers

- §63.3480 What is the purpose of this subpart?

This subpart establishes national emission standards for hazardous air pollutants (NESHAP) for metal can surface coating facilities. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations.

§63.3481 Am I subject to this subpart?

(a) Except as provided in paragraph (c) of this section, the source category to which this subpart applies is surface coating of metal cans and ends (including decorative tins) and metal crowns and closures. It includes the subcategories listed in paragraphs (a)(1) through (4) of this section. Surface coating is the application of coatings to a substrate using, for example, spray guns or dip tanks.

(1) One and two-piece draw and iron can body coating. The one and two-piece draw and iron can body coating subcategory includes all coating processes involved in the manufacture of can bodies by the draw and iron process. This subcategory includes three distinct coating type segments reflecting the coatings appropriate for cans with different end uses. Those are two-piece beverage can body coatings, two-piece food can body coatings, and one-piece aerosol can body coatings.

(2) Sheetcoating. The sheetcoating subcategory includes all of the flat metal sheetcoating operations associated with the manufacture of three-piece cans, decorative tins, crowns, and closures.

(3) Three-piece can body assembly coating. The three-piece can body assembly coating subcategory includes all of the coating processes involved in the assembly of three-piece metal can bodies. The subcategory includes five distinct coating type segments reflecting the coatings appropriate for cans with different end uses. Those are inside spray on food cans, aseptic side seam stripes on food cans, nonaseptic side seam stripes on food cans, side seam stripes on general line nonfood cans, and side seam stripes on aerosol nonfood cans.

(4) End coating. The end coating subcategory includes the application of end seal compounds and repair spray coatings to metal can ends. This subcategory includes three distinct coating type segments reflecting the end seal compounds and repair sprays appropriate for can ends with different end uses. Those are aseptic end seal compounds, nonaseptic end seal compounds, and repair spray coatings.

(b) You are subject to this subpart if you own or

operate a new, reconstructed, or existing affected source, as defined in §63.3482, that uses 5,700 liters (1,500 gallons (gal)) per year, or more, of coatings in the source category defined in paragraph (a) of this section and that is a major source, is located at a major source, or is part of a major source of emissions of hazardous air pollutants (HAP). A major source of HAP emissions is any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit any single HAP at a rate of 9.07 megagrams (Mg) (10 tons) or more per year or any combination of HAP at a rate of 22.68 Mg (25 tons) or more per year.

(c) This subpart does not apply to surface coating that meets the criteria of paragraphs (c)(1) through (5) of this section.

(1) Surface coating conducted at a source that uses only coatings, thinners, and cleaning materials that contain no organic HAP, as determined according to §63.3521(a).

(2) Surface coating subject to any other NESHA in this part as of [INSERT DATE OF PUBLICATION OF THIS FINAL RULE IN THE FEDERAL REGISTER].

(3) Surface coating and cleaning activities that use research or laboratory equipment or that are part of janitorial, building, and facility maintenance operations.

(4) Surface coating of continuous metal coil that may subsequently be used in manufacturing cans. Subpart SSSS of this part covers surface coating performed on a continuous metal coil substrate.

(5) Surface coating of metal pails, buckets, and drums. Future subpart MMMM of this part will cover surface coating of all miscellaneous metal parts and products not explicitly covered by another subpart.

63.3482 What parts of my plant does this subpart cover?

(a) This subpart applies to each new, reconstructed, and existing affected source.

(b) The affected source is the collection of all of the items listed in paragraphs (b)(1) through (4) of this section that are used for surface coating of metal cans and ends (including decorative tins), or metal crowns or closures:

(1) All coating operations as defined in §63.3561;

(2) All storage containers and mixing vessels in which coatings, thinners, and cleaning materials are stored or mixed;

(3) All manual and automated equipment and containers used for conveying coatings, thinners, and cleaning materials; and

(4) All storage containers and all manual and automated equipment and containers used for conveying waste materials generated by a coating operation.

(c) An affected source is a new affected source if you commenced its construction after January 15, 2003 by installing new coating equipment. New coating equipment is equipment used to perform metal can surface coating at a facility where no metal can surface coating was previously performed and the construction is of a completely new metal can surface coating source where previously no metal can surface coating source had existed.

(d) An affected source is reconstructed if you meet the criteria as defined in §63.2.

(e) An affected source is existing if it is not new or reconstructed.

§63.3483 When do I have to comply with this subpart?

The date by which you must comply with this subpart is called the compliance date. The compliance date for each type of affected source is specified in paragraphs

(a) through (c) of this section. The compliance date begins the initial compliance period during which you conduct the initial compliance demonstration described in §§63.3520, 63.3530, 63.3540, and 63.3550.

(a) For a new or reconstructed affected source, the compliance date is the applicable date in paragraph (a)(1) or (2) of this section.

(1) If the initial startup of your new or reconstructed affected source is before [INSERT DATE OF PUBLICATION OF THIS FINAL RULE IN THE FEDERAL REGISTER], the compliance date is [INSERT DATE OF PUBLICATION OF THIS FINAL RULE IN THE FEDERAL REGISTER].

(2) If the initial startup of your new or reconstructed affected source occurs after [INSERT DATE OF PUBLICATION OF THIS FINAL RULE IN THE FEDERAL REGISTER], the compliance date is the date of initial startup of your affected source.

(b) For an existing affected source, the compliance date is [INSERT DATE 3 YEARS AFTER DATE OF PUBLICATION OF THIS FINAL RULE IN THE FEDERAL REGISTER].

(c) For an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP emissions, the compliance date is specified

in paragraphs (c)(1) and (2) of this section.

(1) For any portion of the source that becomes a new or reconstructed affected source subject to this subpart, the compliance date is the date of initial startup of the affected source or [INSERT DATE OF PUBLICATION OF THIS FINAL RULE IN THE FEDERAL REGISTER], whichever is later.

(2) For any portion of the source that becomes an existing affected source subject to this subpart, the compliance date is the date 1 year after the area source becomes a major source or [INSERT DATE 3 YEARS AFTER DATE OF PUBLICATION OF THIS FINAL RULE IN THE FEDERAL REGISTER], whichever is later.

(d) You must meet the notification requirements in §63.3510 according to the dates specified in that section and in subpart A of this part. Some of the notifications must be submitted before the compliance dates described in paragraphs (a) through (c) of this section.

Emission Limitations

§63.3490 What emission limits must I meet?

(a) For a new or reconstructed affected source, you must limit organic HAP emissions to the atmosphere to no more than the emission limit(s) in Table 1 to this subpart that apply to you during each 12-month compliance period,

determined according to the requirements in §63.3521, §63.3531, or §63.3541; or if you control emissions with an emissions control system using the control efficiency/outlet concentration option as specified in §63.3491(d), you must reduce organic HAP emissions to the atmosphere to no more than the limit(s) in Table 3 to this subpart, determined according to the requirements of §63.3551. If you perform surface coating in more than one subcategory or utilize more than one coating type within a subcategory, then you must meet the individual emission limit(s) for each subcategory and coating type included.

(b) For an existing affected source, you must limit organic HAP emissions to the atmosphere to no more than the emission limit(s) in Table 2 to this subpart that apply to you during each 12-month compliance period, determined according to the requirements in §63.3521, §63.3531, or §63.3541; or if you control emissions with an emissions control system using the control efficiency/outlet concentration option as specified in §63.3491(d), you must reduce organic HAP emissions to the atmosphere to no more than the limit(s) in Table 3 to this subpart, determined according to the requirements of §63.3551. If you perform surface coating in more than one

subcategory or utilize more than one coating type within a subcategory, then you must meet the individual emission limit(s) for each subcategory and coating type included.

(c) If you perform surface coating in different subcategories as described in §63.3481(a)(1) through (4), then the coating operations in each subcategory constitute a separate affected source, and you must conduct separate compliance demonstrations for each applicable subcategory and coating type emission limit in paragraphs (a) and (b) of this section and reflect those separate determinations in notifications, reports, and records required by §§63.3510, 63.3511, and 63.3512, respectively.

§63.3491 What are my options for meeting the emission limits?

You must include all coatings and thinners used in all surface coating operations within a subcategory or coating type segment when determining whether the organic HAP emission rate is equal to or less than the applicable emission limit in §63.3490. To make that determination, you must use at least one of the four compliance options listed in paragraphs (a) through (d) of this section. You may apply any of the compliance options to an individual coating operation or to multiple coating operations within

a subcategory or coating type segment as a group. You may use different compliance options for different coating operations or at different times on the same coating operation. However, you may not use different compliance options at the same time on the same coating operation. If you switch between compliance options for any coating operation or group of coating operations, you must document that switch as required by §63.3512(c), and you must report it in the next semiannual compliance report required in §63.3511.

(a) Compliant material option. Demonstrate that the organic HAP content of each coating used in the coating operation(s) is less than or equal to the applicable emission limit in §63.3490, and that each thinner used contains no organic HAP. You must meet all the requirements of §§63.3520, 63.3521, and 63.3522 to demonstrate compliance with the emission limit using this option.

(b) Emission rate without add-on controls option. Demonstrate that, based on the coatings and thinners used in the coating operation(s), the organic HAP emission rate for the coating operation(s) is less than or equal to the applicable emission limit in §63.3490, calculated as a

rolling 12-month emission rate and determined on a monthly basis. You must meet all the requirements of §§63.3530, 63.3531, and 63.3532 to demonstrate compliance with the emission limit using this option.

(c) Emission rate with add-on controls option.

Demonstrate that, based on the coatings and thinners used in the coating operation(s) and the emission reductions achieved by emission capture systems and add-on controls, the organic HAP emission rate for the coating operation(s) is less than or equal to the applicable emission limit in §63.3490, calculated as a rolling 12-month emission rate and determined on a monthly basis. If you use this compliance option, you must also demonstrate that all emission capture systems and add-on control devices for the coating operation(s) used for purposes of complying with this subpart meet the operating limits required in §63.3492, except for solvent recovery systems for which you conduct liquid-liquid material balances according to §63.3541(i), and that you meet the work practice standards required in §63.3493. You must meet all the requirements of §§63.3540 through 63.3547 to demonstrate compliance with the emission limits, operating limits, and work practice standards using this option.

(d) Control efficiency/outlet concentration option.

Demonstrate that, based on the emission reductions achieved by emission capture systems and add-on controls, total HAP emissions measured as total hydrocarbon (THC) are reduced by 95 percent or greater for existing sources, or 97 percent or greater for new or reconstructed sources, or that outlet THC emissions are less than or equal to 20 parts per million by volume, dry basis (ppmvd). If you use this compliance option, you must have a capture device that meets EPA Method 204 of 40 CFR part 51, Appendix M criteria for a permanent total enclosure (PTE). You must also demonstrate that all emission capture systems and add-on control devices for the coating operation(s) used for purposes of complying with this subpart meet the operating limits required in §63.3492, and that you meet the work practice standards required in §63.3493. You must meet all the requirements of §§63.3550 through 63.3557 to demonstrate compliance with the emission limits, operating limits, and work practice standards using this option.

§63.3492 What operating limits must I meet?

(a) For any coating operation(s) on which you use the compliant material option or the emission rate without

add-on controls option, you are not required to meet any operating limits.

(b) For any controlled coating operation(s) on which you use the emission rate with add-on controls option or the control efficiency/outlet concentration option, except those for which you use a solvent recovery system and conduct a liquid-liquid material balance according to §63.3541(i), you must meet the operating limits specified in Table 4 to this subpart. Those operating limits apply to the emission capture and control systems for the coating operation(s) used for purposes of complying with this subpart. You must establish the operating limits during the performance test according to the requirements in §63.3546 or §63.3556, and you must meet the operating limits at all times after you establish them.

(c) If you use an add-on control device other than those listed in Table 4 to this subpart or wish to monitor an alternative parameter and comply with a different operating limit, you must apply to the Administrator for approval of alternative monitoring under §63.8(f).

§63.3493 What work practice standards must I meet?

(a) For any coating operation(s) for which you use the compliant material option or the emission rate without

add-on controls option, you are not required to meet any work practice standards.

(b) If you use the emission rate with add-on controls option or the control efficiency/outlet concentration option to comply with the emission limitations, you must develop and implement a work practice plan to minimize organic HAP emissions from the storage, mixing, and conveying of coatings, thinners, and cleaning materials used in, and waste materials generated by, the coating operation(s) for which you use those options; or you must meet an alternative standard as provided in paragraph (c) of this section. The plan must specify practices and procedures to ensure that, at a minimum, the elements specified in paragraphs (b)(1) through (5) of this section are implemented.

(1) All organic-HAP-containing coatings, thinners, cleaning materials, and waste materials must be stored in closed containers.

(2) Spills of organic-HAP-containing coatings, thinners, cleaning materials, and waste materials must be minimized.

(3) Organic-HAP-containing coatings, thinners, cleaning materials, and waste materials must be conveyed

from one location to another in closed containers or pipes.

(4) Mixing vessels which contain organic-HAP-containing coatings and other materials must be closed except when adding to, removing, or mixing the contents.

(5) Emissions of organic HAP must be minimized during cleaning of storage, mixing, and conveying equipment.

(c) As provided in §63.6(g), we, the U.S. Environmental Protection Agency (U.S. EPA), may choose to grant you permission to use an alternative to the work practice standards in this section.

General Compliance Requirements

§63.3500 What are my general requirements for complying with this subpart?

(a) You must be in compliance with the emission limitations in this subpart as specified in paragraphs (a)(1) and (2) of this section.

(1) Any coating operation(s) for which you use the compliant material option or the emission rate without add-on controls option, as specified in §63.3491(a) and (b), must be in compliance with the applicable emission limit in §63.3490.

(2) Any coating operation(s) for which you use the emission rate with add-on controls option, as specified in §63.3491(c), or the control efficiency/outlet concentration option, as specified in §63.3491(d), must be in compliance with the emission limitations as specified in paragraphs (a)(2)(i) through (iii) of this section.

(i) The coating operation(s) must be in compliance with the applicable emission limit in §63.3490 at all times.

(ii) The coating operation(s) must be in compliance with the operating limits for emission capture systems and add-on control devices required by §63.3492 at all times, except for those for which you use a solvent recovery system and conduct liquid-liquid material balances according to §63.3541(i). The operating limits apply only to capture systems and control devices used for purposes of complying with this subpart.

(iii) The coating operation(s) must be in compliance with the work practice standards in §63.3493 at all times.

(b) You must always operate and maintain your affected source, including all air pollution control and monitoring equipment you use for purposes of complying with this subpart, according to the provisions in

§63.6(e)(1)(i).

(c) If your affected source uses an emission capture system and add-on control device for purposes of complying with this subpart, you must develop and implement a written startup, shutdown, and malfunction plan (SSMP) according to the provisions in §63.6(e)(3). The plan must address startup, shutdown, and corrective actions in the event of a malfunction of the emission capture system or the add-on control device. The plan must also address any coating operation equipment that may cause increased emissions or that would affect capture efficiency if the process equipment malfunctions, such as conveyors that move parts among enclosures.

§63.3501 What parts of the General Provisions apply to me?

Table 5 to this subpart shows which parts of the General Provisions in §§63.1 through 63.15 apply to you.

Notifications, Reports, and Records

§63.3510 What notifications must I submit?

(a) General. You must submit the notifications in §§63.7(b) and (c), 63.8(f)(4), and 63.9(b) through (e) and (h) that apply to you by the dates specified in those sections, except as provided in paragraphs (b) and (c) of

this section.

(b) Initial notification. You must submit the Initial Notification required by §63.9(b) for a new or reconstructed affected source no later than 120 days after initial startup or 120 days after [INSERT DATE OF PUBLICATION OF THIS FINAL RULE IN THE FEDERAL REGISTER], whichever is later. For an existing affected source, you must submit the Initial Notification no later than [INSERT DATE 1 YEAR AFTER DATE OF PUBLICATION OF THIS FINAL RULE IN THE FEDERAL REGISTER].

(c) Notification of compliance status. You must submit the Notification of Compliance Status required by §63.9(h) no later than 30 calendar days following the end of the initial compliance period described in §63.3520, §63.3530, §63.3540, or §63.3550 that applies to your affected source. The Notification of Compliance Status must contain the information specified in paragraphs (c)(1) through (9) of this section and in §63.9(h).

(1) Company name and address.

(2) Statement by a responsible official with that official's name, title, and signature certifying the truth, accuracy, and completeness of the content of the report.

(3) Date of the report and beginning and ending dates of the reporting period. The reporting period is the initial compliance period described in §63.3520, §63.3530, §63.3540, or §63.3550 that applies to your affected source.

(4) Identification of the compliance option or options specified in §63.3491 that you used on each coating operation in the affected source during the initial compliance period.

(5) Statement of whether or not the affected source achieved the emission limitations for the initial compliance period.

(6) If you had a deviation, include the information in paragraphs (c)(6)(i) and (ii) of this section.

(i) A description and statement of the cause of the deviation.

(ii) If you failed to meet the applicable emission limit in §63.3490, include all the calculations you used to determine the kilogram (kg) organic HAP emitted per liter of coating solids used. You do not need to submit information provided by the materials suppliers or manufacturers or test reports.

(7) For each of the data items listed in paragraphs

(c)(7)(i) through (iv) of this section that is required by the compliance option(s) you used to demonstrate compliance with the emission limit, include an example of how you determined the value, including calculations and supporting data. Supporting data can include a copy of the information provided by the supplier or manufacturer of the example coating or material or a summary of the results of testing conducted according to §63.3521(a), (b), or (c). You do not need to submit copies of any test reports.

(i) Mass fraction of organic HAP for one coating and for one thinner.

(ii) Volume fraction of coating solids for one coating.

(iii) Density for one coating and one thinner, except that if you use the compliant material option, only the example coating density is required.

(iv) The amount of waste materials and the mass of organic HAP contained in the waste materials for which you are claiming an allowance in Equation 1 of §63.3531.

(8) The calculation of kg organic HAP emitted per liter of coating solids used for the compliance option(s) you used, as specified in paragraphs (c)(8)(i) through

(iii) of this section.

(i) For the compliant material option, provide an example calculation of the organic HAP content for one coating, using Equation 1 of §63.3521.

(ii) For the emission rate without add-on controls option, provide the calculation of the total mass of organic HAP emissions for each month, the calculation of the total volume of coating solids used each month, and the calculation of the 12-month organic HAP emission rate, using Equations 1, 1A through 1C, 2, and 3, respectively, of §63.3531.

(iii) For the emission rate with add-on controls option, provide the calculation of the total mass of organic HAP emissions for the coatings and thinners used each month, using Equations 1 and 1A through 1C of §63.3531; the calculation of the total volume of coating solids used each month, using Equation 2 of §63.3531; the calculation of the mass of organic HAP emission reduction each month by emission capture systems and add-on control devices, using Equations 1 and 1A through 1D of §63.3541, and Equations 2, 3, and 3A through 3C of §63.3541, as applicable; the calculation of the total mass of organic HAP emissions each month, using Equation 4 of §63.3541, as

applicable; and the calculation of the 12-month organic HAP emission rate, using Equation 5 of §63.3541.

(9) For the emission rate with add-on controls option or the control efficiency/outlet concentration option, you must include the information specified in paragraphs (c)(9)(i) through (iv) of this section. The requirements in paragraphs (c)(9)(i) through (iii) of this section do not apply to solvent recovery systems for which you conduct liquid-liquid material balances according to §63.3541(i).

(i) For each emission capture system, a summary of the data and copies of the calculations supporting the determination that the emission capture system is a PTE or a measurement of the emission capture system efficiency. Include a description of the protocol followed for measuring capture efficiency, summaries of any capture efficiency tests conducted, and any calculations supporting the capture efficiency determination. If you use the data quality objective (DQO) or lower confidence limit (LCL) approach, you must also include the statistical calculations to show you meet the DQO or LCL criteria in appendix A to subpart KK of this part. You do not need to submit complete test reports.

(ii) A summary of the results of each add-on control device performance test. You do not need to submit complete test reports.

(iii) A list of each emission capture system's and add-on control device's operating limits and a summary of the data used to calculate those limits.

(iv) A statement of whether or not you developed and implemented the work practice plan required by §63.3493.

§63.3511 What reports must I submit?

(a) Semiannual compliance reports. You must submit semiannual compliance reports for each affected source according to the requirements of paragraphs (a)(1) through (7) of this section. The semiannual compliance reporting requirements may be satisfied by reports required under other parts of the Clean Air Act (CAA), as specified in paragraph (a)(2) of this section.

(1) Dates. Unless the Administrator has approved a different schedule for submission of reports under §63.10(a), you must prepare and submit each semiannual compliance report according to the dates specified in paragraphs (a)(1)(i) through (iv) of this section. Note that the information reported for each of the months in the reporting period will be based on the last 12 months

of data prior to the date of each monthly calculation.

(i) The first semiannual compliance report must cover the first semiannual reporting period which begins the day after the end of the initial compliance period described in §63.3520, §63.3530, §63.3540, or §63.3550 that applies to your affected source and ends on June 30 or December 31, whichever occurs first following the end of the initial compliance period.

(ii) Each subsequent semiannual compliance report must cover the subsequent semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(iii) Each semiannual compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

(iv) For each affected source that is subject to permitting regulations pursuant to 40 CFR part 70 or 40 CFR part 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), you may submit the first and subsequent compliance reports according to the dates the

permitting authority has established instead of the date specified in paragraph (a)(1)(iii) of this section.

(2) Inclusion with title V report. Each affected source that has obtained a title V operating permit pursuant to 40 CFR part 70 or 40 CFR part 71 must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If an affected source submits a semiannual compliance report pursuant to this section along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the semiannual compliance report includes all required information concerning deviations from any emission limitation in this subpart, its submission will be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a semiannual compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permitting authority.

(3) General requirements. The semiannual compliance report must contain the information specified in

paragraphs (a)(3)(i) through (v) of this section and the information specified in paragraphs (a)(4) through (7) and (c)(1) of this section that is applicable to your affected source.

(i) Company name and address.

(ii) Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.

(iii) Date of report and beginning and ending dates of the reporting period. The reporting period is the 6-month period ending on June 30 or December 31. Note that the information reported for each of the 6 months in the reporting period will be based on the last 12 months of data prior to the date of each monthly calculation.

(iv) Identification of the compliance option or options specified in §63.3491 that you used on each coating operation during the reporting period. If you switched between compliance options during the reporting period, you must report the beginning and ending dates you used each option.

(v) If you used the emission rate without add-on controls or the emission rate with add-on controls

compliance option (§63.3491(b) or (c)), the calculation results for each rolling 12-month organic HAP emission rate during the 6-month reporting period.

(4) No deviations. If there were no deviations from the emission limitations, operating limits, or work practice standards in §§63.3490, 63.3492, and 63.3493 that apply to you, the semiannual compliance report must include a statement that there were no deviations from the emission limitations during the reporting period. If you used the emission rate with add-on controls option or the control efficiency/outlet concentration option and there were no periods during which the continuous parameter monitoring systems (CPMS) were out of control as specified in §63.8(c)(7), the semiannual compliance report must include a statement that there were no periods during which the CPMS were out of control during the reporting period.

(5) Deviations: compliant material option. If you used the compliant material option and there was a deviation from the applicable emission limit in §63.3490, the semiannual compliance report must contain the information in paragraphs (a)(5)(i) through (iv) of this section.

(i) Identification of each coating used that deviated from the emission limit, each thinner used that contained organic HAP, and the dates and time periods each was used.

(ii) The calculation of the organic HAP content (using Equation 1 of §63.3521) for each coating identified in paragraph (a)(5)(i) of this section. You do not need to submit background data supporting this calculation (e.g., information provided by coating suppliers or manufacturers, or test reports).

(iii) The determination of mass fraction of organic HAP for each coating and thinner identified in paragraph (a)(5)(i) of this section. You do not need to submit background data supporting this calculation (e.g., information provided by material suppliers or manufacturers, or test reports).

(iv) A statement of the cause of each deviation.

(6) Deviations: emission rate without add-on controls option. If you used the emission rate without add-on controls option and there was a deviation from the applicable emission limit in §63.3490, the semiannual compliance report must contain the information in paragraphs (a)(6)(i) through (iii) of this section.

(i) The beginning and ending dates of each compliance period during which the 12-month organic HAP emission rate exceeded the applicable emission limit in §63.3490.

(ii) The calculations used to determine the 12-month organic HAP emission rate for the compliance period in which the deviation occurred. You must provide the calculations for Equations 1, 1A through 1C, 2, and 3 in §63.3531; and if applicable, the calculation used to determine mass of organic HAP in waste materials according to §63.3531(e)(3). You do not need to submit background data supporting these calculations (e.g., information provided by materials suppliers or manufacturers, or test reports).

(iii) A statement of the cause of each deviation.

(7) Deviations: emission rate with add-on controls option. If you used the emission rate with add-on controls option and there was a deviation from an emission limitation (including any periods when emissions bypassed the add-on control device and were diverted to the atmosphere), the semiannual compliance report must contain the information in paragraphs (a)(7)(i) through (xiv) of this section. That includes periods of startup, shutdown,

and malfunction during which deviations occurred.

(i) The beginning and ending dates of each compliance period during which the 12-month organic HAP emission rate exceeded the applicable emission limit in §63.3490.

(ii) The calculations used to determine the 12-month organic HAP emission rate for each compliance period in which a deviation occurred. You must provide the calculation of the total mass of organic HAP emissions for the coatings and thinners used each month, using Equations 1 and 1A through 1C of §63.3531 and, if applicable, the calculation used to determine mass of organic HAP in waste materials according to §63.3531(e)(3); the calculation of the total volume of coating solids used each month, using Equation 2 of §63.3531; the calculation of the mass of organic HAP emission reduction each month by emission capture systems and add-on control devices, using Equations 1 and 1A through 1D of §63.3541, and Equations 2, 3, and 3A through 3C of §63.3541, as applicable; the calculation of the total mass of organic HAP emissions each month, using Equation 4 of §63.3541; and the calculation of the 12-month organic HAP emission rate, using Equation 5 of §63.3541. You do not need to submit

the background data supporting these calculations (e.g., information provided by materials suppliers or manufacturers, or test reports).

(iii) The date and time that each malfunction started and stopped.

(iv) A brief description of the CPMS.

(v) The date of the latest CPMS certification or audit.

(vi) The date and time that each CPMS was inoperative, except for zero (low-level) and high-level checks.

(vii) The date, time, and duration that each CPMS was out of control, including the information in §63.8(c)(8).

(viii) The date and time period of each deviation from an operating limit in Table 4 to this subpart; date and time period of any bypass of the add-on control device; and whether each deviation occurred during a period of startup, shutdown, or malfunction or during another period.

(ix) A summary of the total duration of each deviation from an operating limit in Table 4 to this subpart and each bypass of the add-on control device

during the semiannual reporting period and the total duration as a percent of the total source operating time during that semiannual reporting period.

(x) A breakdown of the total duration of the deviations from the operating limits in Table 4 to this subpart and bypasses of the add-on control device during the semiannual reporting period into those that were due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes.

(xi) A summary of the total duration of CPMS downtime during the semiannual reporting period and the total duration of CPMS downtime as a percent of the total source operating time during that semiannual reporting period.

(xii) A description of any changes in the CPMS, coating operation, emission capture system, or add-on control device since the last semiannual reporting period.

(xiii) For each deviation from the work practice standards, a description of the deviation; the date and time period of the deviation; and the actions you took to correct the deviation.

(xiv) A statement of the cause of each deviation.

(8) Deviations: control efficiency/outlet

concentration option. If you used the control efficiency/outlet concentration option, and there was a deviation from an emission limitation (including any periods when emissions bypassed the add-on control device and were diverted to the atmosphere), the semiannual compliance report must contain the information in paragraphs (a)(8)(i) through (xii) of this section. This includes periods of startup, shutdown, and malfunction during which deviations occurred.

(i) The date and time that each malfunction started and stopped.

(ii) A brief description of the CPMS.

(iii) The date of the latest certification or audit of the CPMS.

(iv) The date and time that each CPMS was inoperative, except for zero (low-level) and high-level checks.

(v) The date, time, and duration that each CPMS was out-of-control, including the information in §63.8(c)(8).

(vi) The date and time period of each deviation from an operating limit in Table 4 to this subpart; date and time of any bypass of the add-on control device; and whether each deviation occurred during a period of

startup, shutdown, or malfunction or during another period.

(vii) A summary of the total duration of each deviation from an operating limit in Table 4 to this subpart and each bypass of the add-on control device during the semiannual reporting period and the total duration as a percent of the total source operating time during that semiannual reporting period.

(viii) A breakdown of the total duration of the deviations from the operating limits in Table 4 to this subpart and bypasses of the add-on control device during the semiannual reporting period into those that were due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes.

(ix) A summary of the total duration of CPMS downtime during the semiannual reporting period and the total duration of CPMS downtime as a percent of the total source operating time during that semiannual reporting period.

(x) A description of any changes in the CPMS, coating operation, emission capture system, or add-on control device since the last semiannual reporting period.

(xi) For each deviation from the work practice

standards, a description of the deviation; the date and time period of the deviation; and the actions you took to correct the deviation.

(xii) A statement of the cause of each deviation.

(b) Performance test reports. If you use the emission rate with add-on controls option or the control efficiency/outlet concentration option, you must submit reports of performance test results for emission capture systems and add-on control devices no later than 60 days after completing the tests as specified in §63.10(d)(2).

(c) Startup, shutdown, malfunction reports. If you used the emission rate with add-on controls option or the control efficiency/outlet concentration option and you had a startup, shutdown, or malfunction during the semiannual reporting period, you must submit the reports specified in paragraphs (c)(1) and (2) of this section.

(1) If your actions were consistent with your SSMP, you must include the information specified in §63.10(d) in the semiannual compliance report required by paragraph (a) of this section.

(2) If your actions were not consistent with your SSMP, you must submit an immediate startup, shutdown, and malfunction report as described in paragraphs (c)(2)(i)

and (ii) of this section.

(i) You must describe the actions taken during the event in a report delivered by facsimile, telephone, or other means to the Administrator within 2 working days after starting actions that are inconsistent with the SSMP.

(ii) You must submit a letter to the Administrator within 7 working days after the end of the event, unless you have made alternative arrangements with the Administrator as specified in §63.10(d)(5)(ii). The letter must contain the information specified in §63.10(d)(5)(ii).

§63.3512 What records must I keep?

You must collect and keep records of the data and information specified in this section. Failure to collect and keep the records is a deviation from the applicable standard.

(a) A copy of each notification and report that you submitted to comply with this subpart and the documentation supporting each notification and report.

(b) A current copy of information provided by materials suppliers or manufacturers, such as manufacturer's formulation data, or test data used to

determine the mass fraction of organic HAP and density for each coating and thinner and the volume fraction of coating solids for each coating. If you conducted testing to determine mass fraction of organic HAP, density, or volume fraction of coating solids, you must keep a copy of the complete test report. If you use information provided to you by the manufacturer or supplier of the material that was based on testing, you must keep the summary sheet of results provided to you by the manufacturer or supplier. You are not required to obtain the test report or other supporting documentation from the manufacturer or supplier.

(c) For each compliance period, the records specified in paragraphs (c)(1) through (4) of this section.

(1) A record of the coating operations at which you used each compliance option and the time periods (beginning and ending dates and times) you used each option.

(2) For the compliant material option, a record of the calculation of the organic HAP content for each coating, using Equation 1 of §63.3521.

(3) For the emission rate without add-on controls

option, a record of the calculation of the total mass of organic HAP emissions for the coatings and thinners used each month, using Equations 1, 1A through 1C, and 2 of §63.3531 and, if applicable, the calculation used to determine mass of organic HAP in waste materials according to §63.3531(e)(3); the calculation of the total volume of coating solids used each month, using Equation 2 of §63.3531; and the calculation of each 12-month organic HAP emission rate, using Equation 3 of §63.3531.

(4) For the emission rate with add-on controls option, records of the calculations specified in paragraphs (c)(4)(i) through (v) of this section.

(i) The calculation of the total mass of organic HAP emissions for the coatings and thinners used each month, using Equations 1 and 1A through 1C of §63.3531 and, if applicable, the calculation used to determine mass of organic HAP in waste materials according to §63.3531(e)(3).

(ii) The calculation of the total volume of coating solids used each month, using Equation 2 of §63.3531.

(iii) The calculation of the mass of organic HAP emission reduction by emission capture systems and add-on control devices, using Equations 1 and 1A through 1D of

§63.3541, and Equations 2, 3, and 3A through 3C of §63.3541, as applicable.

(iv) The calculation of the total mass of organic HAP emissions each month, using Equation 4 of §63.3541.

(v) The calculation of each 12-month organic HAP emission rate, using Equation 5 of §63.3541.

(5) For the control efficiency/outlet concentration option, records of the measurements made by the CPMS used to demonstrate compliance. For any coating operation(s) for which you use this option, you do not have to keep the records specified in paragraphs (d) through (g) of this section.

(d) A record of the name and volume of each coating and thinner used during each compliance period.

(e) A record of the mass fraction of organic HAP for each coating and thinner used during each compliance period.

(f) A record of the volume fraction of coating solids for each coating used during each compliance period.

(g) A record of the density for each coating used during each compliance period; and, if you use either the emission rate without add-on controls or the emission rate with add-on controls compliance option, the density for

each thinner used during each compliance period.

(h) If you use an allowance in Equation 1 of §63.3531 for organic HAP contained in waste materials sent to or designated for shipment to a treatment, storage, and disposal facility (TSDF) according to §63.3531(e)(3) or otherwise managed in accordance with applicable Federal and State waste management regulations, you must keep records of the information specified in paragraphs (h)(1) through (3) of this section.

(1) The name and address of each TSDF or other applicable waste management location to which you sent waste materials for which you use an allowance in Equation 1 of §63.3531, a statement of which subparts under 40 CFR parts 262, 264, 265, and 266 apply to the facility and the date of each shipment.

(2) Identification of the coating operations producing waste materials included in each shipment and the month or months in which you used the allowance for these materials in Equation 1 of §63.3531.

(3) The methodology used in accordance with §63.3531(e)(3) to determine the total amount of waste materials sent to or the amount collected, stored, and designated for transport to a TSDF or other applicable

waste management location each month and the methodology to determine the mass of organic HAP contained in these waste materials. That must include the sources for all data used in the determination, methods used to generate the data, frequency of testing or monitoring, and supporting calculations and documentation, including the waste manifest for each shipment.

(i) You must keep records of the date, time, and duration of each deviation.

(j) If you use the emission rate with add-on controls option or the control efficiency/outlet concentration option, you must keep the records specified in paragraphs (j)(1) through (8) of this section.

(1) For each deviation, a record of whether the deviation occurred during a period of startup, shutdown, or malfunction.

(2) The records in §63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction.

(3) The records required to show continuous compliance with each operating limit specified in Table 4 to this subpart that applies to you.

(4) For each capture system that is a PTE, the data and documentation you used to support a determination that

the capture system meets the criteria in Method 204 of appendix M to 40 CFR part 51 for a PTE and has a capture efficiency of 100 percent, as specified in §63.3544(a).

(5) For each capture system that is not a PTE, the data and documentation you used to determine capture efficiency according to the requirements specified in §§63.3543 and 63.3544(b) through (e) including the records specified in paragraphs (j)(5)(i) through (iii) of this section that apply to you.

(i) Records for a liquid-to-uncaptured-gas protocol using a temporary total enclosure or building enclosure.

Records of the mass of total volatile hydrocarbon (TVH) as measured by Method 204A or F of appendix M to 40 CFR part 51 for each material used in the coating operation and the total TVH for all materials used during each capture efficiency test run including a copy of the test report.

Records of the mass of TVH emissions not captured by the capture system that exited the temporary total enclosure (TTE) or building enclosure during each capture efficiency test run, as measured by Method 204D or E of appendix M to 40 CFR part 51, including a copy of the test report.

Records documenting that the enclosure used for the capture efficiency test met the criteria in Method 204 of

appendix M to 40 CFR part 51 for either a TTE or a building enclosure.

(ii) Records for a gas-to-gas protocol using a temporary total enclosure or a building enclosure.

Records of the mass of TVH emissions captured by the emission capture system as measured by Method 204B or C of appendix M to 40 CFR part 51 at the inlet to the add-on control device including a copy of the test report.

Records of the mass of TVH emissions not captured by the capture system that exited the TTE or building enclosure during each capture efficiency test run as measured by Method 204D or E of appendix M to 40 CFR part 51 including a copy of the test report. Records documenting that the enclosure used for the capture efficiency test met the criteria in Method 204 of appendix M to 40 CFR part 51 for either a TTE or a building enclosure.

(iii) Records for an alternative protocol. Records needed to document a capture efficiency determination using an alternative method or protocol as specified in §63.3544(e) if applicable.

(6) The records specified in paragraphs (j)(6)(i) and (ii) of this section for each add-on control device organic HAP destruction or removal efficiency determination as specified in §63.3545 or §63.3555.

(i) Records of each add-on control device performance test conducted according to §63.3543 or §63.3553 and §63.3545 or §63.3555.

(ii) Records of the coating operation conditions during the add-on control device performance test showing that the performance test was conducted under representative operating conditions.

(7) Records of the data and calculations you used to establish the emission capture and add-on control device operating limits as specified in §63.3546 or §63.3556 and to document compliance with the operating limits as specified in Table 4 to this subpart.

(8) A record of the work practice plan required by §63.3493 and documentation that you are implementing the plan on a continuous basis.

§63.3513 In what form and for how long must I keep my records?

(a) Your records must be kept in a form suitable and readily available for expeditious review, according to §63.10(b)(1). Where appropriate, the records may be maintained as electronic spreadsheets or as a database.

(b) As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence,

measurement, maintenance, corrective action, report, or record.

(c) You must keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1). You may keep the records off site for the remaining 3 years.

Compliance Requirements for the Compliant Material Option

§63.3520 By what date must I conduct the initial compliance demonstration?

You must complete the initial compliance demonstration for the initial compliance period according to the requirements in §63.3521. The initial compliance period begins on the applicable compliance date specified in §63.3483 and ends on the last day of the 12th month following the compliance date. If the compliance date occurs on any day other than the first day of a month, then the initial compliance period extends through the end of that month plus the next 12 months. The initial compliance demonstration includes the calculations according to §63.3521 and supporting documentation showing that, during the initial compliance period, you used no coating with an organic HAP content that exceeded the

applicable emission limit in §63.3490 and you used no thinners that contained organic HAP.

§63.3521 How do I demonstrate initial compliance with the emission limitations?

You may use the compliant material option for any individual coating operation, for any group of coating operations within a subcategory or coating type segment, or for all the coating operations within a subcategory or coating type segment. You must use either the emission rate without add-on controls option, the emission rate with add-on controls option, or the control efficiency/outlet concentration option for any coating operation in the affected source for which you do not use that option. To demonstrate initial compliance using the compliant material option, the coating operation or group of coating operations must use no coating with an organic HAP content that exceeds the applicable emission limit in §63.3490 and must use no thinner that contains organic HAP as determined according to this section. Any coating operation for which you use the compliant material option is not required to meet the operating limits or work practice standards required in §§63.3492 and 63.3493, respectively. You must conduct a separate initial

compliance demonstration for each one and two-piece draw and iron can body coating, sheetcoating, three-piece can body assembly coating, and end coating affected source. You must meet all the requirements of this section for the coating operation or group of coating operations using this option. Use the procedures in this section on each coating and thinner in the condition it is in when it is received from its manufacturer or supplier and prior to any alteration (e.g., mixing or thinning). Do not include any coatings or thinners used on coating operations for which you use the emission rate without add-on controls option, the emission rate with add-on controls option, or the control efficiency/outlet concentration option. You do not need to redetermine the HAP content of coatings or thinners that have been reclaimed onsite and reused in the coating operation(s) for which you use the compliant material option, provided these materials in their condition as received were demonstrated to comply with the compliant material option.

(a) Determine the mass fraction of organic HAP for each material used. You must determine the mass fraction of organic HAP for each coating and thinner used during the compliance period by using one of the options in

paragraphs (a)(1) through (5) of this section.

(1) Method 311 (appendix A to 40 CFR part 63). You may use Method 311 for determining the mass fraction of organic HAP. Use the procedures specified in paragraphs (a)(1)(i) and (ii) of this section when performing a Method 311 test.

(i) Count each organic HAP that is measured to be present at 0.1 percent by mass or more for Occupational Safety and Health Administration (OSHA)-defined carcinogens as specified in 29 CFR 1910.1200(d)(4) and at 1.0 percent by mass or more for other compounds. For example, if toluene (not an OSHA carcinogen) is measured to be 0.5 percent of the material by mass, you do not have to count it. Express the mass fraction of each organic HAP you count as a value truncated to four places after the decimal point (e.g., 0.3791).

(ii) Calculate the total mass fraction of organic HAP in the test material by adding up the individual organic HAP mass fractions and truncating the result to three places after the decimal point (e.g., 0.763).

(2) Method 24 (Appendix A to 40 CFR Part 60). For coatings, you may use Method 24 to determine the mass fraction of nonaqueous volatile matter and use that value

as a substitute for mass fraction of organic HAP.

(3) Alternative method. You may use an alternative test method for determining the mass fraction of organic HAP once the Administrator has approved it. You must follow the procedure in §63.7(f) to submit an alternative test method for approval.

(4) Information from the supplier or manufacturer of the material. You may rely on information other than that generated by the test methods specified in paragraphs (a)(1) through (3) of this section, such as manufacturer's formulation data, if it represents each organic HAP that is present at 0.1 percent by mass or more for OSHA-defined carcinogens as specified in 29 CFR 1910.1200(d)(4) and at 1.0 percent by mass or more for other compounds. For example, if toluene (not an OSHA carcinogen) is 0.5 percent of the material by mass, you do not have to count it. If there is a disagreement between such information and results of a test conducted according to paragraphs (a)(1) through (3) of this section, then the test method results will take precedence unless, after consultation, a regulated source can demonstrate to the satisfaction of the enforcement agency that the formulation data are correct.

(5) Solvent blends. Solvent blends may be listed as single components for some materials in data provided by manufacturers or suppliers. Solvent blends may contain organic HAP which must be counted toward the total organic HAP mass fraction of the materials. When test data and manufacturer's data for solvent blends are not available, you may use the default values for the mass fraction of organic HAP in those solvent blends listed in Table 6 or 7 to this subpart. If you use the tables, you must use the values in Table 6 to this subpart for all solvent blends that match Table 6 entries, and you may only use Table 7 to this subpart if the solvent blends in the materials you use do not match any of the solvent blends in Table 6 and you only know whether the blend is aliphatic or aromatic. However, if the results of a Method 311 (40 CFR part 63, appendix A) test indicate higher values than those listed on Table 6 or 7 to this subpart, the Method 311 results will take precedence.

(b) Determine the volume fraction of coating solids for each coating. You must determine the volume fraction of coating solids (liters of coating solids per liter of coating) for each coating used during the compliance period by a test or by information provided by the

supplier or the manufacturer of the material as specified in paragraphs (b)(1) and (2) of this section. If test results obtained according to paragraph (b)(1) of this section do not agree with the information obtained under paragraph (b)(2) of this section, the test results will take precedence.

(1) ASTM Method D2697-86 (Reapproved 1998) or D6093-97. You may use ASTM Method D2697-86 (Reapproved 1998), "Standard Test Method for Volume Nonvolatile Matter in Clear or Pigmented Coatings" (incorporated by reference, see §63.14), or D6093-97, "Standard Test Method for Percent Volume Nonvolatile Matter in Clear or Pigmented Coatings Using a Helium Gas Pycnometer" (incorporated by reference, see §63.14), to determine the volume fraction of coating solids for each coating. Divide the nonvolatile volume percent obtained with the methods by 100 to calculate volume fraction of coating solids. If these values cannot be determined using these methods, the owner/operator may submit an alternative technique for determining the values for approval by the Administrator.

(2) Information from the supplier or manufacturer of the material. You may obtain the volume fraction of coating solids for each coating from the supplier or

manufacturer.

(c) Determine the density of each coating.

Determine the density of each coating used during the compliance period from test results using ASTM Method D1475-90 or information from the supplier or manufacturer of the material. If there is disagreement between ASTM Method D1475-90 test results and the supplier's or manufacturer's information, the test results will take precedence.

(d) Calculate the organic HAP content of each coating. Calculate the organic HAP content, kg organic HAP per liter coating solids, of each coating used during the compliance period, using Equation 1 of this section.

$$H_C = \frac{(D_C)(W_C)}{V_S} \quad (\text{Eq. 1})$$

Where:

H_C	=	Organic HAP content of the coating, kg organic HAP per liter coating solids.
D_C	=	Density of coating, kg coating per liter coating, determined according to paragraph (c) of this section.
W_C	=	mass fraction of organic HAP in the coating, kg organic HAP per kg coating, determined according to paragraph (a) of this section.
V_S	=	Volume fraction of coating solids, liter coating solids per liter coating, determined according to paragraph (b) of

this section.

(e) Compliance demonstration. The organic HAP content for each coating used during the initial compliance period, determined using Equation 1 of this section, must be less than or equal to the applicable emission limit in §63.3490 and each thinner used during the initial compliance period must contain no organic HAP, determined according to paragraph (a) of this section. You must keep all records required by §§63.3512 and 63.3513. As part of the Notification of Compliance Status required in §63.3510, you must identify the coating operation(s) for which you used the compliant material option and submit a statement that the coating operation(s) was (were) in compliance with the emission limitations during the initial compliance period because you used no coatings for which the organic HAP content exceeded the applicable emission limit in §63.3490, and you used no thinners that contained organic HAP, determined according to paragraph (a) of this section.

§63.3522 How do I demonstrate continuous compliance with the emission limitations?

(a) For each compliance period, to demonstrate continuous compliance, you must use no coating for which

the organic HAP content, determined using Equation 1 of §63.3521, exceeds the applicable emission limit in §63.3490 and use no thinner that contains organic HAP, determined according to §63.3521(a). A compliance period consists of 12 months. Each month after the end of the initial compliance period described in §63.3520 is the end of a compliance period consisting of that month and the preceding 11 months.

(b) If you choose to comply with the emission limitations by using the compliant material option, the use of any coating or thinner that does not meet the criteria specified in paragraph (a) of this section is a deviation from the emission limitations that must be reported as specified in §§63.3510(b)(6) and 63.3511(a)(5).

(c) As part of each semiannual compliance report required by §63.3511, you must identify the coating operation(s) for which you used the compliant material option. If there were no deviations from the emission limitations in §63.3490, submit a statement that the coating operation(s) was (were) in compliance with the emission limitations during the reporting period because you used no coating for which the organic HAP content

exceeded the applicable emission limit in §63.3490, and you used no thinner or cleaning material that contained organic HAP, determined according to §63.3521(a).

(d) You must maintain records as specified in §§63.3512 and 63.3513.

Compliance Requirements for the

Emission Rate Without Add-On Controls Option

§63.3530 By what date must I conduct the initial compliance demonstration?

You must complete the initial compliance demonstration for the initial compliance period according to the requirements of §63.3531. The initial compliance period begins on the applicable compliance date specified in §63.3483 and ends on the last day of the 12th month following the compliance date. If the compliance date occurs on any day other than the first day of a month, then the initial compliance period extends through the end of that month plus the next 12 months. You must determine the mass of organic HAP emissions and volume of coating solids used each month and then calculate a 12-month organic HAP emission rate at the end of the initial 12-month compliance period. The initial compliance demonstration includes the calculations according to

§63.3531 and supporting documentation showing that, during the initial compliance period, the organic HAP emission rate was equal to or less than the applicable emission limit in §63.3490.

§63.3531 How do I demonstrate initial compliance with the emission limitations?

You may use the emission rate without add-on controls option for any coating operation, for any group of coating operations within a subcategory or coating type segment, or for all of the coating operations within a subcategory or coating type segment. You must use either the compliant material option, the emission rate with add-on controls option, or the control efficiency/outlet concentration option for any coating operation in the affected source for which you do not use this option. If you use the alternative overall emission limit for a subcategory according to paragraph (i) of this section to demonstrate compliance, however, you must include all coating operations in all coating type segments in the subcategory to determine compliance with the overall limit. To demonstrate initial compliance using the emission rate without add-on controls option, the coating operation or group of coating operations must meet the

applicable emission limit in §63.3490, but is not required to meet the operating limits or work practice standards in §§63.3492 and 63.3493, respectively. You must conduct a separate initial compliance demonstration for each one and two-piece draw and iron can body coating, sheetcoating, three-piece can body assembly coating, and end coating affected source. You must meet all the requirements of this section to demonstrate initial compliance with the applicable emission limit in §63.3490 for the coating operation(s). When calculating the organic HAP emission rate according to this section, do not include any coatings or thinners used on coating operations for which you use the compliant material option, the emission rate with add-on controls option, or the control efficiency/outlet concentration option or coating operations in a different affected source in a different subcategory. Use the procedures in this section on each coating and thinner in the condition it is in when it is received from its manufacturer or supplier and prior to any alteration (e.g., mixing or thinning). You do not need to redetermine the mass of organic HAP in coatings or thinners that have been reclaimed onsite and reused in the coating operation(s) for which you use the emission rate

without add-on controls option.

(a) Determine the mass fraction of organic HAP for each material. Determine the mass fraction of organic HAP for each coating and thinner used during each month according to the requirements in §63.3521(a).

(b) Determine the volume fraction of coating solids for each coating. Determine the volume fraction of coating solids for each coating used during each month according to the requirements in §63.3521(b).

(c) Determine the density of each material. Determine the density of each coating and thinner used during each month from test results using ASTM Method D1475-90, information from the supplier or manufacturer of the material, or reference sources providing density or specific gravity data for pure materials. If there is disagreement between ASTM Method D1475-90 test results and such other information sources, the test results will take precedence.

(d) Determine the volume of each material used. Determine the volume (liters) of each coating and thinner used during each month by measurement or usage records.

(e) Calculate the mass of organic HAP emissions. The mass of organic HAP emissions is the combined mass of

organic HAP contained in all coatings and thinners used during each month minus the organic HAP in certain waste materials. Calculate it using Equation 1 of this section.

$$H_e = A + B - R_w \quad (\text{Eq. 1})$$

Where:

H_e	=	Total mass of organic HAP emissions during the month, kg.
A	=	Total mass of organic HAP in the coatings used during the month, kg, as calculated in Equation 1A of this section.
B	=	Total mass of organic HAP in the thinners used during the month, kg, as calculated in Equation 1B of this section.
R_w	=	Total mass of organic HAP in waste materials sent or designated for shipment to a hazardous waste TSDF or other applicable waste management location for treatment or disposal during the month, kg, determined according to paragraph (e)(3) of this section. (You may assign a value of zero to R_w if you do not wish to use this allowance.)

(1) Calculate the mass of organic HAP in the coatings used during the month using Equation 1A of this section.

$$A = \sum_{i=1}^m (Vol_{c,i})(D_{c,i})(W_{c,i}) \quad (\text{Eq. 1A})$$

Where:

A	=	Total mass of organic HAP in the coatings used during the month, kg.
$Vol_{c,i}$	=	Total volume of coating, i , used during the

month, liters.
 $D_{C,i}$ = Density of coating, i, kg coating per liter coating.
 $W_{C,i}$ = Mass fraction of organic HAP in coating, i, kg organic HAP per kg coating.
 m = Number of different coatings used during the month.

(2) Calculate the mass of organic HAP in the thinners used during the month using Equation 1B of this section.

$$B = \sum_{j=1}^n (Vol_{t,j})(D_{t,j})(W_{t,j}) \quad (\text{Eq. 1B})$$

Where:

B = Total mass of organic HAP in the thinners used during the month, kg.
 $Vol_{t,j}$ = Total volume of thinner, j, used during the month, liters.
 $D_{t,j}$ = Density of thinner, j, kg per liter.
 $W_{t,j}$ = Mass fraction of organic HAP in thinner, j, kg organic HAP per kg thinner.
 n = Number of different thinners used during the month.

(3) If you choose to account for the mass of organic HAP contained in waste materials sent or designated for shipment to a hazardous waste TSDF or other applicable waste management location in Equation 1 of this section, then you must determine it according to paragraphs (e)(3)(i) through (iv) of this section.

(i) You may include in the determination only waste

materials that are generated by coating operations for which you use Equation 1 of this section and that will be treated or disposed of by a facility regulated as a TSDF under 40 CFR part 262, 264, 265, or 266 or otherwise managed in accordance with applicable Federal and State waste management regulations. The TSDF or other applicable waste management location may be either offsite or onsite. You may not include organic HAP contained in wastewater.

(ii) You must determine either the amount of the waste materials sent to a TSDF, or other applicable waste management location, during the month, or the amount collected and stored during the month and designated for future transport to a TSDF or other applicable waste management location. Do not include in your determination any waste materials sent to a TSDF or other applicable waste management location during a month if you have already included them in the amount collected and stored during that month or a previous month.

(iii) Determine the total mass of organic HAP contained in the waste materials specified in paragraph (e)(3)(ii) of this section.

(iv) You must document the methodology you used to

determine the amount of waste materials and the total mass of organic HAP they contain as required in §63.3512(h).

To the extent that waste manifests include this information, they may be used as part of the documentation of the amount of waste materials and mass of organic HAP contained in them.

(f) Calculate the total volume of coating solids used. Determine the total volume of coating solids used which is the combined volume of coating solids for all the coatings used during each month using Equation 2 of this section.

$$V_{st} = \sum_{i=1}^m (Vol_{C,i})(V_{S,i}) \quad (\text{Eq. 2})$$

Where:

V_{st}	=	Total volume of coating solids used during the month, liters.
$Vol_{C,i}$	=	Total volume of coating, i, used during the month, liters.
$V_{S,i}$	=	Volume fraction of coating solids for coating, i, liter solids per liter coating, determined according to §63.3521(b).
m	=	Number of coatings used during the month.

(g) Calculate the organic HAP emission rate.

Calculate the organic HAP emission rate for the 12-month compliance period, kg organic HAP per liter coating solids

used, using Equation 3 of this section.

$$H_{\text{Yr}} = \frac{\sum_{y=1}^{12} H_e}{\sum_{y=1}^{12} V_{\text{st}}} \quad (\text{Eq. 3})$$

Where:

- H_{Yr} = Organic HAP emission rate for the 12-month compliance period, kg organic HAP per liter coating solids.
- H_e = Total mass of organic HAP emissions, kg, from all materials used during month, y , as calculated by Equation 1 of this section.
- V_{st} = Total volume of coating solids, liters, used during month, y , as calculated by Equation 2 of this section.
- y = Identifier for months.

(h) Compliance demonstration. The organic HAP emission rate for the initial 12-month compliance period, H_{Yr} , must be less than or equal to the applicable emission limit in §63.3490. You must keep all records as required by §§63.3512 and 63.3513. As part of the Notification of Compliance Status required by §63.3510, you must identify the coating operation(s) for which you used the emission rate without add-on controls option and submit a statement that the coating operation(s) was (were) in compliance

with the emission limitations during the initial compliance period because the organic HAP emission rate was less than or equal to the applicable emission limit in §63.3490, determined according to this section.

(i) Alternative calculation of overall subcategory emission limit (OSEL). Alternatively, if your affected source applies coatings in more than one coating type segment within a subcategory, you may calculate an overall HAP emission limit for the subcategory using Equation 4 of this section. If you use this approach, you must limit organic HAP emissions to the atmosphere to the OSEL specified by Equation 4 of this section during each 12-month compliance period.

$$OSEL = \frac{\sum_{i=1}^n L_i(V_i)}{\sum_{i=1}^n V_i} \quad (\text{Eq. 4})$$

Where:

OSEL = Total allowable organic HAP in kg HAP/liter coating solids (pound (lb) HAP/gal solids) that can be emitted to the atmosphere from all coating type segments in the subcategory.

L_i	=	HAP emission limit for coating type segment i from Table 1 for a new or reconstructed source or Table 2 for an existing source, kg HAP/liter coating solids (lb HAP/gal solids).
V_i	=	Total volume of coating solids in liters (gal) for all coatings in coating type segment i used during the 12-month compliance period.
n	=	Number of coating type segments within one subcategory being used at the affected source.

You must use the OSEL determined by Equation 4 of this section throughout the 12-month compliance period and may not switch between compliance with individual coating type limits and an OSEL. You may not include coatings in different subcategories in determining your OSEL by this approach. You must keep all records as required by §§63.3512 and 63.3513. As part of the Notification of Compliance Status required by §63.3510, you must identify the subcategory for which you used a calculated OSEL and submit a statement that the coating operation(s) was (were) in compliance with the emission limitations during the initial compliance period because the organic HAP emission rate for the subcategory was less than or equal to the OSEL determined according to this section.

§63.3532 How do I demonstrate continuous compliance with the emission limitations?

- (a) To demonstrate continuous compliance, the

organic HAP emission rate for each compliance period, determined according to §63.3531(a) through (g), must be less than or equal to the applicable emission limit in §63.3490. Alternatively, if you calculate an OSEL for all coating type segments within a subcategory according to §63.3531(i), the organic HAP emission rate for the subcategory for each compliance period must be less than or equal to the calculated OSEL. You must use the calculated OSEL throughout each compliance period. A compliance period consists of 12 months. Each month after the end of the initial compliance period described in §63.3530 is the end of a compliance period consisting of that month and the preceding 11 months. You must perform the calculations in §63.3531(a) through (g) on a monthly basis using data from the previous 12 months of operation.

(b) If the organic HAP emission rate for any 12-month compliance period exceeded the applicable emission limit in §63.3490 or the OSEL calculated according to §63.3531(i), this is a deviation from the emission limitations for that compliance period and must be reported as specified in §§63.3510(c)(6) and 63.3511(a)(6).

(c) As part of each semiannual compliance report

required by §63.3511, you must identify the coating operation(s) for which you used the emission rate without add-on controls option. If there were no deviations from the emission limitations, you must submit a statement that the coating operation(s) was (were) in compliance with the emission limitations during the reporting period because the organic HAP emission rate for each compliance period was less than or equal to the applicable emission limit in §63.3490 determined according to §63.3531(a) through (g), or using the OSEL calculated according to §63.3531(i).

(d) You must maintain records as specified in §§63.3512 and 63.3513.

Compliance Requirements for the

Emission Rate With Add-On Controls Option

§63.3540 By what date must I conduct performance tests and other initial compliance demonstrations?

(a) New and reconstructed affected sources. For a new or reconstructed affected source, you must meet the requirements of paragraphs (a)(1) through (4) of this section.

(1) All emission capture systems, add-on control devices, and CPMS must be installed and operating no later than the applicable compliance date specified in §63.3483.

Except for solvent recovery systems for which you conduct liquid-liquid material balances according to §63.3541(i), you must conduct a performance test of each capture system and add-on control device according to §§63.3543, 63.3544, and 63.3545 and establish the operating limits required by §63.3492 no later than 180 days after the applicable compliance date specified in §63.3483. For a solvent recovery system for which you conduct liquid-liquid material balances according to §63.3541(i), you must initiate the first material balance no later than the applicable compliance date specified in §63.3483.

(2) You must develop and begin implementing the work practice plan required by §63.3493 no later than the compliance date specified in §63.3483.

(3) You must complete the initial compliance demonstration for the initial compliance period according to the requirements of §63.3541. The initial compliance period begins on the applicable compliance date specified in §63.3483 and ends on the last day of the 12th month following the compliance date. If the compliance date occurs on any day other than the first day of a month, then the initial compliance period extends through the end of that month plus the next 12 months. You must determine

the mass of organic HAP emissions and volume of coating solids used each month and then calculate a 12-month organic HAP emission rate at the end of the initial 12-month compliance period. The initial compliance demonstration includes the results of emission capture system and add-on control device performance tests conducted according to §§63.3543, 63.3544, and 63.3545; results of liquid-liquid material balances conducted according to §63.3541(i); calculations according to §63.3541 and supporting documentation showing that, during the initial compliance period, the organic HAP emission rate was equal to or less than the emission limit in §63.3490(a); the operating limits established during the performance tests and the results of the continuous parameter monitoring required by §63.3547; and documentation of whether you developed and implemented the work practice plan required by §63.3493.

(4) You do not need to comply with the operating limits for the emission capture system and add-on control device required by §63.3492 until after you have completed the performance tests specified in paragraph (a)(1) of this section. Instead, you must maintain a log detailing the operation and maintenance of the emission capture

system, add-on control device, and continuous parameter monitors during the period between the compliance date and the performance test. You must begin complying with the operating limits for your affected source on the date you complete the performance tests specified in paragraph (a)(1) of this section. The requirements in this paragraph (a)(4) do not apply to solvent recovery systems for which you conduct liquid-liquid material balances according to the requirements in §63.3541(i).

(b) Existing affected sources. For an existing affected source, you must meet the requirements of paragraphs (b)(1) through (3) of this section.

(1) All emission capture systems, add-on control devices, and CPMS must be installed and operating no later than the applicable compliance date specified in §63.3483. Except for solvent recovery systems for which you conduct liquid-liquid material balances according to §63.3541(i), you must conduct a performance test of each capture system and add-on control device according to the procedures in §§63.3543, 63.3544, and 63.3545 and establish the operating limits required by §63.3492 no later than the compliance date specified in §63.3483. For a solvent recovery system for which you conduct liquid-liquid

material balances according to §63.3541(i), you must initiate the first material balance no later than the compliance date specified in §63.3483.

(2) You must develop and begin implementing the work practice plan required by §63.3493 no later than the compliance date specified in §63.3483.

(3) You must complete the initial compliance demonstration for the initial compliance period according to the requirements of §63.3541. The initial compliance period begins on the applicable compliance date specified in §63.3483 and ends on the last day of the 12th month following the compliance date. If the compliance date occurs on any day other than the first day of a month, then the initial compliance period extends through the end of that month plus the next 12 months. You must determine the mass of organic HAP emissions and volume of coating solids used each month and then calculate a 12-month organic HAP emission rate at the end of the initial 12-month compliance period. The initial compliance demonstration includes the results of emission capture system and add-on control device performance tests conducted according to §§63.3543, 63.3544, and 63.3545; results of liquid-liquid material balances conducted

according to §63.3541(i); calculations according to §63.3541 and supporting documentation showing that during the initial compliance period the organic HAP emission rate was equal to or less than the emission limit in §63.3490(b); the operating limits established during the performance tests and the results of the continuous parameter monitoring required by §63.3547; and documentation of whether you developed and implemented the work practice plan required by §63.3493.

§63.3541 How do I demonstrate initial compliance?

(a) You may use the emission rate with add-on controls option for any coating operation, for any group of coating operations within a subcategory or coating type segment, or for all of the coating operations within a subcategory or coating type segment. You may include both controlled and uncontrolled coating operations in a group for which you use this option. You must use either the compliant material option, the emission rate without add-on controls option, or the control efficiency/outlet concentration option for any coating operation in the affected source for which you do not use the emission rate with add-on controls option. To demonstrate initial compliance, the coating operation(s) for which you use the

emission rate with add-on controls option must meet the applicable emission limitations in §63.3490. You must conduct a separate initial compliance demonstration for each one and two-piece draw and iron can body coating, sheetcoating, three-piece can body assembly coating, and end coating affected source. You must meet all the requirements of this section to demonstrate initial compliance with the emission limitations. When calculating the organic HAP emission rate according to this section, do not include any coatings or thinners used on coating operations for which you use the compliant material option, the emission rate without add-on controls option, or the control efficiency/outlet concentration option. You do not need to redetermine the mass of organic HAP in coatings or thinners that have been reclaimed onsite and reused in the coating operation(s) for which you use the emission rate with add-on controls option.

(b) Compliance with operating limits. Except as provided in §63.3540(a)(4) and except for solvent recovery systems for which you conduct liquid-liquid material balances according to the requirements of §63.3541(i), you must establish and demonstrate continuous compliance

during the initial compliance period with the operating limits required by §63.3492 using the procedures specified in §§63.3546 and 63.3547.

(c) Compliance with work practice requirements. You must develop, implement, and document your implementation of the work practice plan required by §63.3493 during the initial compliance period, as specified in §63.3512.

(d) Compliance with emission limits. You must follow the procedures in paragraphs (e) through (n) of this section to demonstrate compliance with the applicable emission limit in §63.3490.

(e) Determine the mass fraction of organic HAP, density, volume used, and volume fraction of coating solids. Follow the procedures specified in §63.3531(a) through (d) to determine the mass fraction of organic HAP, density, and volume of each coating and thinner used during each month and the volume fraction of coating solids for each coating used during each month.

(f) Calculate the total mass of organic HAP emissions before add-on controls. Using Equation 1 of §63.3531, calculate the total mass of organic HAP emissions before add-on controls from all coatings and thinners used during each month in the coating operation

or group of coating operations for which you use the emission rate with add-on controls option.

(g) Calculate the organic HAP emission reduction for each controlled coating operation. Determine the mass of organic HAP emissions reduced for each controlled coating operation during each month. The emission reduction determination quantifies the total organic HAP emissions that pass through the emission capture system and are destroyed or removed by the add-on control device. Use the procedures in paragraph (h) of this section to calculate the mass of organic HAP emission reduction for each controlled coating operation using an emission capture system and add-on control device other than a solvent recovery system for which you conduct liquid-liquid material balances. For each controlled coating operation using a solvent recovery system for which you conduct a liquid-liquid material balance, use the procedures in paragraph (j) of this section to calculate the organic HAP emission reduction.

(h) Calculate the organic HAP emission reduction for each controlled coating operation not using liquid-liquid material balances. For each controlled coating operation using an emission capture system and add-on control

device, other than a solvent recovery system for which you conduct liquid-liquid material balances, calculate the organic HAP emission reduction, using Equation 1 of this section. The calculation applies the emission capture system efficiency and add-on control device efficiency to the mass of organic HAP contained in the coatings, thinners, and cleaning materials that are used in the coating operation served by the emission capture system and add-on control device during each month. For any period of time a deviation specified in §63.3542(c) or (d) occurs in the controlled coating operation, including a deviation during a period of SSM, you must assume zero efficiency for the emission capture system and add-on control device, unless you have other data indicating the actual efficiency of the emission capture system and add-on control device, and the use of these data has been approved by the Administrator. Equation 1 of this section treats the materials used during such a deviation as if they were used on an uncontrolled coating operation for the time period of the deviation.

$$H_c = (A_c + B_c - H_{unc}) \left(\frac{CE}{100} \times \frac{DRE}{100} \right) \quad (\text{Eq. 1})$$

Where:

H_C	=	Mass of organic HAP emission reduction for the controlled coating operation during the month, kg.
A_C	=	Total mass of organic HAP in the coatings used in the controlled coating operation during the month, kg, as calculated in Equation 1A of this section.
B_C	=	Total mass of organic HAP in the thinners used in the controlled coating operation during the month, kg, as calculated in Equation 1B of this section.
H_{unc}	=	Total mass of organic HAP in the coatings, thinners, and cleaning materials used during all deviations specified in §63.3542(c) and (d) that occurred during the month in the controlled coating operation, kg, as calculated in Equation 1D of this section.
CE	=	Capture efficiency of the emission capture system vented to the add-on control device, percent. Use the test methods and procedures specified in §§63.3543 and 63.3544 to measure and record capture efficiency.
DRE	=	Organic HAP destruction or removal efficiency of the add-on control device, percent. Use the test methods and procedures in §§63.3543 and 63.3545 to measure and record the organic HAP destruction or removal efficiency.

(1) Calculate the mass of organic HAP in the coatings used in the controlled coating operation, kg, using Equation 1A of this section.

$$A_C = \sum_{i=1}^m (Vol_{C,i})(D_{C,i})(W_{C,i}) \quad (\text{Eq. 1A})$$

Where:

A_C	=	Total mass of organic HAP in the coatings used in the controlled coating operation during the month, kg.
$Vol_{C,i}$	=	Total volume of coating, i, used during the month, liters.
$D_{C,i}$	=	Density of coating, i, kg per liter.
$W_{C,i}$	=	Mass fraction of organic HAP in coating, i, kg per kg.
m	=	Number of different coatings used.

(2) Calculate the mass of organic HAP in the thinners used in the controlled coating operation, kg, using Equation 1B of this section.

$$B_C = \sum_{j=1}^n (Vol_{t,j})(D_{t,j})(W_{t,j}) \quad (\text{Eq. 1B})$$

Where:

B_C	=	Total mass of organic HAP in the thinners used in the controlled coating operation during the month, kg.
$Vol_{t,j}$	=	Total volume of thinner, j, used during the month, liters.
$D_{t,j}$	=	Density of thinner, j, kg per liter thinner.
$W_{t,j}$	=	Mass fraction of organic HAP in thinner, j, kg organic HAP per kg thinner.
n	=	Number of different thinners used.

(3) Calculate the mass of organic HAP in the cleaning materials used in the controlled coating operation during the month, kg, using Equation 1C of this section.

$$C_C = \sum_{k=1}^p (Vol_{s,k})(D_{s,k})(W_{s,k}) \quad (\text{Eq. 1C})$$

Where:

C_C	=	Total mass of organic HAP in the cleaning materials used in the controlled coating operation during the month, kg.
$Vol_{s,k}$	=	Total volume of cleaning material, k, used during the month, liters.
$D_{s,k}$	=	Density of cleaning material, k, kg per liter.
$W_{s,k}$	=	Mass fraction of organic HAP in cleaning material, k, kg per kg.
p	=	Number of different cleaning materials used.

(4) Calculate the mass of organic HAP in the coatings, thinners, and cleaning materials used in the controlled coating operation during deviations specified in §63.3542(c) and (d), using Equation 1D of this section.

$$H_{unc} = \sum_{h=1}^q (Vol_h)(D_h)(W_h) \quad (\text{Eq. 1D})$$

Where:

H_{unc}	=	Total mass of organic HAP in the coatings, thinners, and cleaning materials used during all deviations specified in §63.3542(c) and (d) that occurred during the month in the controlled coating operation, kg.
Vol_h	=	Total volume of coating, thinner, or cleaning material, h, used in the controlled coating operation during

deviations, liters.
 D_h = Density of coating, thinner, or cleaning material, h, kg per liter.
 W_h = Mass fraction of organic HAP in coating, thinner, or cleaning material, h, kg organic HAP per kg coating.
 q = Number of different coatings, thinners, or cleaning materials.

(i) Calculate the organic HAP emission reduction for each controlled coating operation using liquid-liquid material balances. For each controlled coating operation using a solvent recovery system for which you conduct liquid-liquid material balances, calculate the organic HAP emission reduction by applying the volatile organic matter collection and recovery efficiency to the mass of organic HAP contained in the coatings and thinners that are used in the coating operation controlled by the solvent recovery system during each month. Perform a liquid-liquid material balance for each month as specified in paragraphs (i)(1) through (6) of this section. Calculate the mass of organic HAP emission reduction by the solvent recovery system as specified in paragraph (i)(7) of this section.

(1) For each solvent recovery system, install, calibrate, maintain, and operate according to the manufacturer's specifications, a device that indicates the cumulative amount of volatile organic matter recovered by

the solvent recovery system each month.

(2) For each solvent recovery system, determine the mass of volatile organic matter recovered for the month, kg, based on measurement with the device required in paragraph (i)(1) of this section.

(3) Determine the mass fraction of volatile organic matter for each coating and thinner used in the coating operation controlled by the solvent recovery system during the month, kg volatile organic matter per kg coating. You may determine the volatile organic matter mass fraction using Method 24 of 40 CFR part 60, appendix A, or an EPA approved alternative method, or you may use information provided by the manufacturer or supplier of the coating. In the event of any inconsistency between information provided by the manufacturer or supplier and the results of Method 24 of 40 CFR part 60, appendix A, or an approved alternative method, the test method results will take precedence unless, after consultation, a regulated source can demonstrate to the satisfaction of the enforcement agency that the formulation data are correct.

(4) Determine the density of each coating and thinner used in the coating operation controlled by the solvent recovery system during the month, kg per liter,

according to §63.3531(c).

(5) Measure the volume of each coating, thinner, and cleaning material used in the coating operation controlled by the solvent recovery system during the month, liters.

(6) Each month, calculate the solvent recovery system's volatile organic matter collection and recovery efficiency, using Equation 2 of this section.

$$R_V = 100 \frac{M_{VR}}{\sum_{i=1}^m (\text{Vol}_i) (D_i) (WV_{C,i}) + \sum_{j=1}^n (\text{Vol}_j) (D_j) (WV_{t,j})} \quad (\text{Eq. 2})$$

Where:

R_V	=	Volatile organic matter collection and recovery efficiency of the solvent recovery system during the month, percent.
M_{VR}	=	Mass of volatile organic matter recovered by the solvent recovery system during the month, kg.
Vol_i	=	Volume of coating, i, used in the coating operation controlled by the solvent recovery system during the month, liters.
D_i	=	Density of coating, i, kg per liter.
$WV_{C,i}$	=	Mass fraction of volatile organic matter for coating, i, kg volatile organic matter per kg coating.
Vol_j	=	Volume of thinner, j, used in the coating operation controlled by the solvent recovery system during the month, liters.
D_j	=	Density of thinner, j, kg per liter.
$WV_{t,j}$	=	Mass fraction of volatile organic matter for thinner, j, kg volatile organic matter per kg thinner.
m	=	Number of different coatings used in the coating operation controlled by the solvent

n = recovery system during the month.
Number of different thinners used in the coating operation controlled by the solvent recovery system during the month.

(7) Calculate the mass of organic HAP emission reduction for the coating operation controlled by the solvent recovery system during the month using Equation 3 of this section.

$$H_{CSR} = (A_{CSR} + B_{CSR}) \left(\frac{R_V}{100} \right) \quad (\text{Eq. 3})$$

Where:

H_{CSR} = Mass of organic HAP emission reduction for the coating operation controlled by the solvent recovery system using a liquid-liquid material balance during the month, kg.

A_{CSR} = Total mass of organic HAP in the coatings used in the coating operation controlled by the solvent recovery system, kg, calculated using Equation 3A of this section.

B_{CSR} = Total mass of organic HAP in the thinners used in the coating operation controlled by the solvent recovery system, kg, calculated using Equation 3B of this section.

R_V = Volatile organic matter collection and recovery efficiency of the solvent recovery system, percent, from Equation 2 of this section.

(i) Calculate the mass of organic HAP in the coatings used in the coating operation controlled by the solvent recovery system, kg, using Equation 3A of this section.

$$A_{CSR} = \sum_{i=1}^m (Vol_{C,i})(D_{C,i})(W_{C,i}) \quad (\text{Eq. 3A})$$

Where:

A_{CSR}	=	Total mass of organic HAP in the coatings used in the coating operation controlled by the solvent recovery system during the month, kg.
$Vol_{C,i}$	=	Total volume of coating, i, used during the month in the coating operation controlled by the solvent recovery system, liters.
$D_{C,i}$	=	Density of coating, i, kg per liter.
$W_{C,i}$	=	Mass fraction of organic HAP in coating, i, kg per kg.
m	=	Number of different coatings used.

(ii) Calculate the mass of organic HAP in the thinners used in the coating operation controlled by the solvent recovery system using Equation 3B of this section.

$$B_{CSR} = \sum_{j=1}^n (Vol_{t,j})(D_{t,j})(W_{t,j}) \quad (\text{Eq. 3B})$$

Where:

B_{CSR}	=	Total mass of organic HAP in the thinners used in the coating operation controlled by the solvent recovery system during the month, kg.
$Vol_{t,j}$	=	Total volume of thinner, j, used during the month in the coating operation controlled by the solvent recovery system, liters.
$D_{t,j}$	=	Density of thinner, j, kg per liter.
$W_{t,j}$	=	Mass fraction of organic HAP in thinner, j, kg per kg.
n	=	Number of different thinners used.

(j) Calculate the total volume of coating solids used. Determine the total volume of coating solids used, which is the combined volume of coating solids for all the coatings used during each month in the coating operation or group of coating operations for which you use the emission rate with add-on controls option, using Equation 2 of §63.3531.

(k) Calculate the mass of organic HAP emissions for each month. Determine the mass of organic HAP emissions during each month using Equation 4 of this section.

$$H_{\text{HAP}} = H_e - \sum_{i=1}^q (H_{\text{C},i}) - \sum_{j=1}^r (H_{\text{CSR},j}) \quad (\text{Eq. 4})$$

Where:

H_{HAP}	=	Total mass of organic HAP emissions for the month, kg.
H_e	=	Total mass of organic HAP emissions before add-on controls from all the coatings and thinners used during the month, kg, determined according to paragraph (f) of this section.
$H_{\text{C},i}$	=	Total mass of organic HAP emission reduction for controlled coating operation, i, not using a liquid-liquid material balance, during the month, kg, from Equation 1 of this section.
$H_{\text{CSR},j}$	=	Total mass of organic HAP emission reduction for coating operation, j, controlled by a solvent recovery system using a liquid-liquid material balance,

during the month, kg, from Equation 3 of this section.

- q = Number of controlled coating operations not using a liquid-liquid material balance.
- r = Number of coating operations controlled by a solvent recovery system using a liquid-liquid material balance.

(1) Calculate the organic HAP emission rate for the 12-month compliance period. Determine the organic HAP emission rate for the 12-month compliance period, kg organic HAP per liter coating solids used, using Equation 5 of this section.

$$H_{\text{annual}} = \frac{\sum_{y=1}^{12} H_{\text{HAP},y}}{\sum_{y=1}^{12} V_{\text{st},y}} \quad (\text{Eq. 5})$$

Where:

- H_{annual} = Organic HAP emission rate for the 12-month compliance period, kg organic HAP per liter coating solids.
- $H_{\text{HAP},y}$ = Organic HAP emission rate for month, y, determined according to Equation 4 of this section.
- $V_{\text{st},y}$ = Total volume of coating solids used during month, y, liters, from Equation 2 of §63.3531.
- y = Identifier for months.

(m) Compliance demonstration. To demonstrate initial compliance with the emission limit, the organic HAP emission rate, calculated using Equation 5 of this section, must be less than or equal to the applicable emission limit in §63.3490. You must keep all records as required by §§63.3512 and 63.3513. As part of the Notification of Compliance Status required by §63.3510, you must identify the coating operation(s) for which you used the emission rate with add-on controls option and submit a statement that the coating operation(s) was in compliance with the emission limitations during the initial compliance period because the organic HAP emission rate was less than or equal to the applicable emission limit in §63.3490, and you achieved the operating limits required by §63.3492 and the work practice standards required by §63.3493.

(n) Alternative calculation of overall subcategory emission limit. Alternatively, if your affected source applies coatings in more than one coating type segment within a subcategory, you may calculate an overall HAP emission limit for the subcategory using Equation 4 of §63.3531. If you use this approach, you must limit organic HAP emissions to the atmosphere to the OSEL

specified by Equation 4 of §63.3531 during each 12-month compliance period. You must use the OSEL determined by Equation 4 of §63.3531 throughout the 12-month compliance period and may not switch between compliance with individual coating type limits and an OSEL. If you follow this approach, you may not include coatings in different subcategories in determining your OSEL. You must keep all records as required by §§63.3512 and 63.3513. As part of the Notification of Compliance Status required by §63.3510, you must identify the subcategory for which you used a calculated OSEL and submit a statement that the coating operation(s) was in compliance with the emission limitations during the initial compliance period because the organic HAP emission rate for the subcategory was less than or equal to the OSEL determined according to this section.

§63.3542 How do I demonstrate continuous compliance with the emission limitations?

(a) To demonstrate continuous compliance with the applicable emission limit in §63.3490, the organic HAP emission rate for each compliance period, determined according to the procedures in §63.3541, must be equal to or less than the applicable emission limit in §63.3490.

Alternatively, if you calculate an OSEL for all coating type segments within a subcategory according to §63.3531(i), the organic HAP emission rate for the subcategory for each compliance period must be less than or equal to the calculated OSEL. You must use the calculated OSEL throughout each compliance period. A compliance period consists of 12 months. Each month after the end of the initial compliance period described in §63.3540 is the end of a compliance period consisting of that month and the preceding 11 months. You must perform the calculations in §63.3541 on a monthly basis using data from the previous 12 months of operation.

(b) If the organic HAP emission rate for any 12-month compliance period exceeded the applicable emission limit in §63.3490, that is a deviation from the emission limitation for that compliance period and must be reported as specified in §§63.3510(b)(6) and 63.3511(a)(7).

(c) You must demonstrate continuous compliance with each operating limit required by §63.3492 that applies to you as specified in Table 4 to this subpart.

(1) If an operating parameter is out of the allowed range specified in Table 4 to this subpart, this is a deviation from the operating limit that must be reported

as specified in §§63.3510(b)(6) and 63.3511(a)(7).

(2) If an operating parameter deviates from the operating limit specified in Table 4 to this subpart, then you must assume that the emission capture system and add-on control device were achieving zero efficiency during the time period of the deviation, unless you have other data indicating the actual efficiency of the emission capture system and add-on control device, and the use of these data has been approved by the Administrator. For the purposes of completing the compliance calculations specified in §63.3541(h), you must treat the materials used during a deviation on a controlled coating operation as if they were used on an uncontrolled coating operation for the time period of the deviation as indicated in Equation 1 of §63.3541.

(d) You must meet the requirements for bypass lines in §63.3547(b) for controlled coating operations for which you do not conduct liquid-liquid material balances. If any bypass line is opened and emissions are diverted to the atmosphere when the coating operation is running, this is a deviation that must be reported as specified in §§63.3510(b)(6) and 63.3511(a)(7). For the purposes of completing the compliance calculations specified in

§63.3541(h), you must treat the materials used during a deviation on a controlled coating operation as if they were used on an uncontrolled coating operation for the time period of the deviation as indicated in Equation 1 of §63.3541.

(e) You must demonstrate continuous compliance with the work practice standards in §63.3493. If you did not develop a work practice plan or you did not implement the plan or you did not keep the records required by §63.3512(j)(8), that is a deviation from the work practice standards that must be reported as specified in §§63.3510(b)(6) and 63.3511(a)(7).

(f) As part of each semiannual compliance report required in §63.3511, you must identify the coating operation(s) for which you used the emission rate with add-on controls option. If there were no deviations from the emission limitations, submit a statement that you were in compliance with the emission limitations during the reporting period because the organic HAP emission rate for each compliance period was less than or equal to the applicable emission limit in §63.3490, and you achieved the operating limits required by §63.3492 and the work practice standards required by §63.3493 during each

compliance period.

(g) During periods of startup, shutdown, or malfunction of the emission capture system, add-on control device, or coating operation that may affect emission capture or control device efficiency, you must operate in accordance with the SSMP required by §63.3500(c).

(h) Consistent with §§63.6(e) and 63.7(e)(1), deviations that occur during a period of startup, shutdown, or malfunction of the emission capture system, add-on control device, or coating operation that may affect emission capture or control device efficiency are not violations if you demonstrate to the Administrator's satisfaction that you were operating in accordance with the SSMP. The Administrator will determine whether deviations that occur during a period you identify as a startup, shutdown, or malfunction are violations according to the provisions in §63.6(e).

(i) You must maintain records as specified in §§63.3512 and 63.3513.

§63.3543 What are the general requirements for performance tests?

(a) You must conduct each performance test required by §63.3540 according to the requirements in §63.7(e)(1)

and under the conditions in this section unless you obtain a waiver of the performance test according to the provisions in §63.7(h).

(1) Representative coating operation operating conditions. You must conduct the performance test under representative operating conditions for the coating operation. Operations during periods of startup, shutdown, or malfunction and during periods of nonoperation do not constitute representative conditions. You must record the process information that is necessary to document operating conditions during the test and explain why the conditions represent normal operation.

(2) Representative emission capture system and add-on control device operating conditions. You must conduct the performance test when the emission capture system and add-on control device are operating at a representative flow rate and the add-on control device is operating at a representative inlet concentration. You must record information that is necessary to document emission capture system and add-on control device operating conditions during the test and explain why the conditions represent normal operation.

(b) You must conduct each performance test of an

emission capture system according to the requirements in §63.3544. You must conduct each performance test of an add-on control device according to the requirements in §63.3545.

§63.3544 How do I determine the emission capture system efficiency?

You must use the procedures and test methods in this section to determine capture efficiency as part of the performance test required by §63.3540.

(a) Assuming 100 percent capture efficiency. You may assume the capture system efficiency is 100 percent if both of the conditions in paragraphs (a)(1) and (2) of this section are met:

(1) The capture system meets the criteria in Method 204 of appendix M to 40 CFR part 51 for a PTE and directs all the exhaust gases from the enclosure to an add-on control device.

(2) All coatings and thinners used in the coating operation are applied within the capture system, and coating solvent flash-off, curing, and drying occurs within the capture system. For example, the criterion is not met if parts enter the open shop environment when being moved between a spray booth and a curing oven.

(b) Measuring capture efficiency. If the capture system does not meet both of the criteria in paragraphs (a)(1) and (2) of this section, then you must use one of the three protocols described in paragraphs (c), (d), and (e) of this section to measure capture efficiency. The capture efficiency measurements use TVH capture efficiency as a surrogate for organic HAP capture efficiency. For the protocols in paragraphs (c) and (d) of this section, the capture efficiency measurement must consist of three test runs. Each test run must be at least 3 hours duration or the length of a production run, whichever is longer, up to 8 hours. For the purposes of this test, a production run means the time required for a single part to go from the beginning to the end of production, which includes surface preparation activities and drying or curing time.

(c) Liquid-to-uncaptured-gas protocol using a temporary total enclosure or building enclosure. The liquid-to-uncaptured-gas protocol compares the mass of liquid TVH in materials used in the coating operation to the mass of TVH emissions not captured by the emission capture system. Use a TTE or a building enclosure and the procedures in paragraphs (c)(1) through (6) of this

section to measure emission capture system efficiency using the liquid-to-uncaptured-gas protocol.

(1) Either use a building enclosure or construct an enclosure around the coating operation where coatings and thinners are applied and all areas where emissions from these applied coatings and materials subsequently occur, such as flash-off, curing, and drying areas. The areas of the coating operation where capture devices collect emissions for routing to an add-on control device, such as the entrance and exit areas of an oven or spray booth, must also be inside the enclosure. The enclosure must meet the applicable definition of a TTE or building enclosure in Method 204 of appendix M to 40 CFR part 51.

(2) Use Method 204A or 204F of appendix M to 40 CFR part 51 to determine the mass fraction of TVH liquid input from each coating and thinner used in the coating operation during each capture efficiency test run. To make the determination, substitute TVH for each occurrence of the term volatile organic compounds (VOC) in the methods.

(3) Use Equation 1 of this section to calculate the total mass of TVH liquid input from all the coatings and thinners used in the coating operation during each capture

efficiency test run.

$$TVH_{used} = \sum_{i=1}^n (TVH_i)(Vol_i)(D_i) \quad (\text{Eq. 1})$$

Where:

TVH_{used}	=	Total mass of liquid TVH in materials used in the coating operation during the capture efficiency test run, kg.
TVH_i	=	Mass fraction of TVH in coating or thinner, i, that is used in the coating operation during the capture efficiency test run, kg TVH per kg material
Vol_i	=	Total volume of coating or thinner, i, used in the coating operation during the capture efficiency test run, liters.
D_i	=	Density of coating or thinner, i, kg material per liter material.
n	=	Number of different coatings and thinners used in the coating operation during the capture efficiency test run.

(4) Use Method 204D or 204E of appendix M to 40 CFR part 51 to measure the total mass, kg, of TVH emissions that are not captured by the emission capture system; they are measured as they exit the TTE or building enclosure during each capture efficiency test run. To make the measurement, substitute TVH for each occurrence of the term VOC in the methods.

(i) Use Method 204D of appendix M to 40 CFR part 51 if the enclosure is a TTE.

(ii) Use Method 204E of appendix M to 40 CFR part 51

if the enclosure is a building enclosure. During the capture efficiency measurement, all organic compound emitting operations inside the building enclosure other than the coating operation for which capture efficiency is being determined must be shut down but all fans and blowers must be operating normally.

(5) For each capture efficiency test run, determine the percent capture efficiency of the emission capture system using Equation 2 of this section.

$$CE = \frac{(TVH_{\text{used}} - TVH_{\text{uncaptured}})}{TVH_{\text{used}}} \times 100 \quad (\text{Eq. 2})$$

Where:

CE	=	Capture efficiency of the emission capture system vented to the add-on control device, percent.
TVH _{used}	=	Total mass of liquid TVH used in the coating operation during the capture efficiency test run, kg.
TVH _{uncaptured}	=	Total mass of TVH that is not captured by the emission capture system and that exits from the TTE or building enclosure during the capture efficiency test run, kg, determined according to paragraph (c)(4) of this section.

(6) Determine the capture efficiency of the emission capture system as the average of the capture efficiencies measured in the three test runs.

(d) Gas-to-gas protocol using a temporary total enclosure or a building enclosure. The gas-to-gas protocol compares the mass of TVH emissions captured by the emission capture system to the mass of TVH emissions not captured. Use a TTE or a building enclosure and the procedures in paragraphs (d)(1) through (5) of this section to measure emission capture system efficiency using the gas-to-gas protocol.

(1) Either use a building enclosure or construct an enclosure around the coating operation where coatings and thinners are applied and all areas where emissions from these applied coatings and materials subsequently occur, such as flash-off, curing, and drying areas. The areas of the coating operation where capture devices collect emissions generated by the coating operation for routing to an add-on control device, such as the entrance and exit areas of an oven or a spray booth, must also be inside the enclosure. The enclosure must meet the applicable definition of a TTE or building enclosure in Method 204 of appendix M to 40 CFR part 51.

(2) Use Method 204B or 204C of appendix M to 40 CFR part 51 to measure the total mass, kg, of TVH emissions captured by the emission capture system during each

capture efficiency test run as measured at the inlet to the add-on control device. To make the measurement, substitute TVH for each occurrence of the term VOC in the methods.

(i) The sampling points for Method 204B or 204C of appendix M to 40 CFR part 51 measurement must be upstream from the add-on control device and must represent total emissions routed from the capture system and entering the add-on control device.

(ii) If multiple emission streams from the capture system enter the add-on control device without a single common duct, then the emissions entering the add-on control device must be simultaneously measured in each duct, and the total emissions entering the add-on control device must be determined.

(3) Use Method 204D or 204E of appendix M to 40 CFR part 51 to measure the total mass, kg, of TVH emissions that are not captured by the emission capture system; they are measured as they exit the TTE or building enclosure during each capture efficiency test run. To make the measurement, substitute TVH for each occurrence of the term VOC in the methods.

(i) Use Method 204D of appendix M to 40 CFR part 51

if the enclosure is a TTE.

(ii) Use Method 204E of appendix M to 40 CFR part 51 if the enclosure is a building enclosure. During the capture efficiency measurement, all organic compound emitting operations inside the building enclosure, other than the coating operation for which capture efficiency is being determined, must be shut down but all fans and blowers must be operating normally.

(4) For each capture efficiency test run, determine the percent capture efficiency of the emission capture system using Equation 3 of this section.

$$CE = \frac{TVH_{\text{captured}}}{(TVH_{\text{captured}} + TVH_{\text{uncaptured}})} \times 100 \quad (\text{Eq. 3})$$

Where:

CE	=	Capture efficiency of the emission capture system vented to the add-on control device, percent.
TVH _{captured}	=	Total mass of TVH captured by the emission capture system as measured at the inlet to the add-on control device during the emission capture efficiency test run, kg, determined according to paragraph (d)(2) of this section.
TVH _{uncaptured}	=	Total mass of TVH that is not captured by the emission capture system and that exits from the TTE or building enclosure during the capture efficiency test run, kg, determined according to paragraph (d)(3) of this section.

(5) Determine the capture efficiency of the emission capture system as the average of the capture efficiencies measured in the three test runs.

(e) Alternative capture efficiency protocol. As an alternative to the procedures specified in paragraphs (c) and (d) of this section, you may determine capture efficiency using any other capture efficiency protocol and test methods that satisfy the criteria of either the DQO or LCL approach as described in appendix A to subpart KK of this part.

§63.3545 How do I determine the add-on control device emission destruction or removal efficiency?

You must use the procedures and test methods in this section to determine the add-on control device emission destruction or removal efficiency as part of the performance test required by §63.3540. You must conduct three test runs as specified in §63.7(e)(3) and each test run must last at least 1 hour.

(a) For all types of add-on control devices, use the test methods specified in paragraphs (a)(1) through (5) of this section.

(1) Use Method 1 or 1A of appendix A to 40 CFR part 60, as appropriate, to select sampling sites and velocity

traverse points.

(2) Use Method 2, 2A, 2C, 2D, 2F, or 2G of appendix A to 40 CFR part 60, as appropriate, to measure gas volumetric flow rate.

(3) Use Method 3, 3A, or 3B of appendix A to 40 CFR part 60, as appropriate, for gas analysis to determine dry molecular weight. You may also use as an alternative to Method 3B the manual method for measuring the oxygen, carbon dioxide, and carbon monoxide content of exhaust gas in ANSI/ASME PTC 19.10-1981, "Flue and Exhaust Gas Analyses [Part 10, Instruments and Apparatus]" (incorporated by reference, see §63.14).

(4) Use Method 4 of appendix A to 40 CFR part 60 to determine stack gas moisture.

(5) Methods for determining gas volumetric flow rate, dry molecular weight, and stack gas moisture must be performed, as applicable, during each test run.

(b) Measure total gaseous organic mass emissions as carbon at the inlet and outlet of the add-on control device simultaneously using either Method 25 or 25A of appendix A to 40 CFR part 60 as specified in paragraphs (b)(1) through (5) of this section. You must use the same method for both the inlet and outlet measurements.

(1) Use Method 25 of appendix A to 40 CFR part 60 if the add-on control device is an oxidizer and you expect the total gaseous organic concentration as carbon to be more than 50 ppm at the control device outlet.

(2) Use Method 25A of appendix A to 40 CFR part 60 if the add-on control device is an oxidizer and you expect the total gaseous organic concentration as carbon to be 50 ppm or less at the control device outlet.

(3) Use Method 25A of appendix A to 40 CFR part 60 if the add-control device is not an oxidizer.

(4) You may use Method 18 of appendix A to 40 CFR part 60 to subtract methane emissions from measured total gaseous organic mass emissions as carbon.

(5) Alternatively, any other test method or data that have been validated according to the applicable procedures in Method 301 of 40 CFR part 63, appendix A, and approved by the Administrator, may be used.

(c) If two or more add-on control devices are used for the same emission stream, then you must measure emissions at the outlet of each device. For example, if one add-on control device is a concentrator with an outlet for the high-volume dilute stream that has been treated by the concentrator, and a second add-on control device is an

oxidizer with an outlet for the low-volume concentrated stream that is treated with the oxidizer, you must measure emissions at the outlet of the oxidizer and the high-volume dilute stream outlet of the concentrator.

(d) For each test run, determine the total gaseous organic emissions mass flow rates for the inlet and the outlet of the add-on control device using Equation 1 of this section. If there is more than one inlet or outlet to the add-on control device, you must calculate the total gaseous organic mass flow rate using Equation 1 of this section for each inlet and each outlet and then total all of the inlet emissions and total all of the outlet emissions.

$$M_f = Q_{sd}C_c(12)(0.0416)(10^{-6}) \quad (\text{Eq. 1})$$

Where:

M_f	=	Total gaseous organic emissions mass flow rate, kg per hour (kg/h).
C_c	=	Concentration of organic compounds as carbon in the vent gas, as determined by Method 25 or Method 25A, ppmvd.
Q_{sd}	=	Volumetric flow rate of gases entering or exiting the add-on control device, as determined by Method 2, 2A, 2C, 2D, 2F, or 2G, dry standard cubic meters/hour (dscm/h).
0.0416	=	Conversion factor for molar volume, kg-moles per cubic meter (mol/m^3) (@ 293 Kelvin (K) and 760 millimeters of mercury

(mmHg)).

Note: If M_f is calculated in English units (lb/h), the conversion factor for molar volume is 0.00256 lb-moles per cubic foot (mol/ft³).

(e) For each test run, determine the add-on control device organic emissions destruction or removal efficiency, using Equation 2 of this section.

$$DRE = 100 \times \frac{M_{fi} - M_{fo}}{M_{fi}} \quad (\text{Eq. 2})$$

Where:

DRE	=	Organic emissions destruction or removal efficiency of the add-on control device, percent.
M_{fi}	=	Total gaseous organic emissions mass flow rate at the inlet(s) to the add-on control device, using Equation 1 of this section, kg/h.
M_{fo}	=	Total gaseous organic emissions mass flow rate at the outlet(s) of the add-on control device, using Equation 1 of this section, kg/h.

(f) Determine the emission destruction or removal efficiency of the add-on control device as the average of the efficiencies determined in the three test runs and calculated in Equation 2 of this section.

§63.3546 How do I establish the emission capture system and add-on control device operating limits during the performance test?

During the performance test required by §63.3540 and

described in §§63.3543, 63.3544, and 63.3545, you must establish the operating limits required by §63.3492 unless you have received approval for alternative monitoring and operating limits under §63.8(f) as specified in §63.3492.

(a) Thermal oxidizers. If your add-on control device is a thermal oxidizer, establish the operating limits according to paragraphs (a)(1) and (2) of this section.

(1) During the performance test, you must monitor and record the combustion temperature at least once every 15 minutes during each of the three test runs. You must monitor the temperature in the firebox of the thermal oxidizer or immediately downstream of the firebox before any substantial heat exchange occurs.

(2) Use the data collected during the performance test to calculate and record the average combustion temperature maintained during the performance test. That average combustion temperature is the minimum operating limit for your thermal oxidizer.

(b) Catalytic oxidizers. If your add-on control device is a catalytic oxidizer, establish the operating limits according to either paragraphs (b)(1) and (2) or paragraphs (b)(3) and (4) of this section.

(1) During the performance test, you must monitor and record the temperature at the inlet to the catalyst bed and the temperature difference across the catalyst bed at least once every 15 minutes during each of the three test runs.

(2) Use the data collected during the performance test to calculate and record the average temperature at the inlet to the catalyst bed and the average temperature difference across the catalyst bed maintained during the performance test. The average temperature difference is the minimum operating limit for your catalytic oxidizer.

(3) As an alternative to monitoring the temperature difference across the catalyst bed, you may monitor the temperature at the inlet to the catalyst bed and implement a site-specific inspection and maintenance plan for your catalytic oxidizer as specified in paragraph (b)(4) of this section. During the performance test, you must monitor and record the temperature at the inlet to the catalyst bed at least once every 15 minutes during each of the three test runs. Use the data collected during the performance test to calculate and record the average temperature at the inlet to the catalyst bed during the performance test. That is the minimum operating limit for

your catalytic oxidizer.

(4) You must develop and implement an inspection and maintenance plan for your catalytic oxidizer(s) for which you elect to monitor according to paragraph (b)(3) of this section. The plan must address, at a minimum, the elements specified in paragraphs (b)(4)(i) through (iii) of this section.

(i) Annual sampling and analysis of the catalyst activity (i.e, conversion efficiency) following the manufacturer's or catalyst supplier's recommended procedures.

(ii) Monthly inspection of the oxidizer system, including the burner assembly and fuel supply lines for problems and, as necessary, adjust the equipment to assure proper air-to-fuel mixtures.

(iii) Annual internal and monthly external visual inspection of the catalyst bed to check for channeling, abrasion, and settling. If problems are found, you must take corrective action consistent with the manufacturer's recommendations and conduct a new performance test to determine destruction efficiency according to §63.3545.

(c) Regenerative oxidizers. If your add-on control device is a regenerative oxidizer, establish operating

limits according to paragraphs (c)(1) and (2) of this section.

(1) You must establish all applicable operating limits according to paragraphs (a) and (b) of this section.

(2) You must submit a valve inspection plan that documents the steps taken to minimize the amount of leakage during the regenerative process. This plan can include, but is not limited to, routine inspection of key parameters of the valve operating system (e.g., solenoid valve operation, air pressure, hydraulic pressure); visual inspection of the valves during internal inspections; and/or actual testing of the emission stream for leakage.

(d) Carbon adsorbers. If your add-on control device is a carbon adsorber, establish the operating limits according to paragraphs (d)(1) and (2) of this section.

(1) You must monitor and record the total regeneration desorbing gas (e.g., steam or nitrogen) mass flow for each regeneration cycle, and the carbon bed temperature after each carbon bed regeneration and cooling cycle for the regeneration cycle either immediately preceding or immediately following the performance test.

(2) The operating limits for your carbon adsorber

are the minimum total desorbing gas mass flow recorded during the regeneration cycle, and the maximum carbon bed temperature recorded after the cooling cycle.

(e) Condensers. If your add-on control device is a condenser, establish the operating limits according to paragraphs (e)(1) and (2) of this section.

(1) During the performance test, monitor and record the condenser outlet (product side) gas temperature at least once every 15 minutes during each of the three test runs.

(2) Use the data collected during the performance test to calculate and record the average condenser outlet (product side) gas temperature maintained during the performance test. This average condenser outlet gas temperature is the maximum operating limit for your condenser.

(f) Concentrators. If your add-on control device includes a concentrator, you must establish operating limits for the concentrator according to paragraphs (f)(1) through (7) of this section.

(1) During the performance test, monitor and record the inlet temperature to the desorption/reactivation zone of the concentrator at least once every 15 minutes during

each of the three runs of the performance test.

(2) Use the data collected during the performance test to calculate and record the average temperature. This is the minimum operating limit for the desorption/reactivation zone inlet temperature.

(3) During the performance test, monitor and record an indicator(s) of performance for the desorption/reactivation fan operation at least once every 15 minutes during each of the three runs of the performance test. The indicator can be speed in revolutions per minute (rpm), power in amps, static pressure, or flow rate.

(4) Establish a suitable range for the parameter(s) selected based on the system design specifications, historical data, and/or data obtained concurrent with an emissions performance test. This is the operation limit range for the desorption/reactivation fan operation.

(5) During the performance test, monitor the rotational speed of the concentrator at least once every 15 minutes during each of the three runs of the performance test.

(6) Use the data collected during the performance test to calculate and record the average rotational speed.

This is the minimum operating limit for the rotational speed of the concentrator. However, the indicator range for the rotational speed may be changed if an engineering evaluation is conducted and a determination made that the change in speed will not affect compliance with the emission limit.

(7) Develop and implement an inspection and maintenance plan for the concentrator(s) that you elect to monitor according to paragraph (f) of this section. The plan must include, at a minimum, annual sampling and analysis of the absorbent material (i.e., adsorbent activity) following the manufacturer's recommended procedures.

(g) Emission capture systems. For each capture device that is not part of a PTE that meets the criteria of §63.3544(a), establish an operating limit for either the gas volumetric flow rate or duct static pressure, as specified in paragraphs (g)(1) and (2) of this section. The operating limit for a PTE is specified in Table 4 to this subpart.

(1) During the capture efficiency determination required by §63.3540 and described in §§63.3543 and 63.3544, you must monitor and record either the gas

volumetric flow rate or the duct static pressure for each separate capture device in your emission capture system at least once every 15 minutes during each of the three test runs at a point in the duct between the capture device and the add-on control device inlet.

(2) Calculate and record the average gas volumetric flow rate or duct static pressure for the three test runs for each capture device. This average gas volumetric flow rate or duct static pressure is the minimum operating limit for that specific capture device.

§63.3547 What are the requirements for continuous parameter monitoring system installation, operation, and maintenance?

(a) General. You must install, operate, and maintain each CPMS specified in paragraphs (c), (e), (f), and (g) of this section according to paragraphs (a)(1) through (6) of this section. You must install, operate, and maintain each CPMS specified in paragraphs (b) and (d) of this section according to paragraphs (a)(3) through (5) of this section.

(1) The CPMS must complete a minimum of one cycle of operation for each successive 15-minute period. You must have a minimum of four equally spaced successive cycles of

CPMS operation in 1 hour.

(2) You must determine the average of all recorded readings for each successive 3-hour period of the emission capture system and add-on control device operation.

(3) You must record the results of each inspection, calibration, and validation check of the CPMS.

(4) You must maintain the CPMS at all times and have available necessary parts for routine repairs of the monitoring equipment.

(5) You must operate the CPMS and collect emission capture system and add-on control device parameter data at all times that a controlled coating operation is operating, except during monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, if applicable, calibration checks and required zero and span adjustments).

(6) You must not use emission capture system or add-on control device parameter data recorded during monitoring malfunctions, associated repairs, out of control periods, or required quality assurance or control activities when calculating data averages. You must use all the data collected during all other periods in calculating the data averages for determining compliance

with the emission capture system and add-on control device operating limits.

(7) A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the CPMS to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions. Any period for which the monitoring system is out of control and data are not available for required calculations is a deviation from the monitoring requirements.

(b) Capture system bypass line. You must meet the requirements of paragraph (b)(1) or (2) of this section for each emission capture system that contains bypass lines that could divert emissions away from the add-on control device to the atmosphere.

(1) Properly install, maintain, and operate a flow indicator that takes a reading at least once every 15 minutes. The flow indicator shall be installed at the entrance to any bypass line.

(2) Secure the bypass line valve in the nondiverting position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to

ensure the valve is maintained in the nondiverting position and the vent stream is not diverted through the bypass line.

(c) Thermal oxidizers and catalytic oxidizers. If you are using a thermal oxidizer or catalytic oxidizer as an add-on control device (including those used with concentrators or with carbon adsorbers to treat desorbed concentrate streams), you must comply with the requirements in paragraphs (c)(1) through (3) of this section.

(1) For a thermal oxidizer, install a gas temperature monitor in the firebox of the thermal oxidizer or in the duct immediately downstream of the firebox before any substantial heat exchange occurs.

(2) For a catalytic oxidizer, install a gas temperature monitor according to paragraph (c)(2)(i) or (ii) of this section.

(i) If you establish operating limits according to §63.3546(b)(1) and (2), then you must install the gas temperature monitors both upstream and downstream of the catalyst bed. The temperature monitors must be in the gas stream at the inlet to and the outlet of the catalyst bed to measure the temperature difference across the bed.

(ii) If you establish operating limits according to §63.3546(b)(3) and (4), then you must install a gas temperature monitor upstream of the catalyst bed. The temperature monitor must be in the gas stream at the inlet to the catalyst bed to measure the temperature.

(3) For all thermal oxidizers and catalytic oxidizers, you must meet the requirements in paragraphs (a) and (c)(3)(i) through (ii) of this section for each gas temperature monitoring device.

(i) Locate the temperature sensor in a position that provides a representative temperature.

(ii) Use a temperature sensor with a minimum accuracy of ± 1.2 degrees Celsius or ± 1 percent of the temperature value in degrees Celsius, whichever is larger.

(d) Carbon adsorbers. If you are using a carbon adsorber as an add-on control device, you must monitor the total regeneration desorbing gas (e.g., steam or nitrogen) mass flow for each regeneration cycle, the carbon bed temperature after each regeneration and cooling cycle, and comply with paragraphs (a)(3) through (5) and (d)(1) and (2) of this section.

(1) The regeneration desorbing gas mass flow monitor

must be an integrating device having an accuracy of ± 10 percent capable of recording the total regeneration desorbing gas mass flow for each regeneration cycle.

(2) The carbon bed temperature monitor must have a minimum accuracy of ± 1.2 degrees Celsius or ± 1 percent of the temperature value in degrees Celsius, whichever is larger, and must be capable of recording the temperature within 15 minutes of completing any carbon bed cooling cycle.

(e) Condensers. If you are using a condenser, you must monitor the condenser outlet (product side) gas temperature and comply with paragraphs (a) and (e)(1) and (2) of this section.

(1) The gas temperature monitor must have a minimum accuracy of ± 1 percent of the temperature recorded in degrees Celsius or ± 1.2 degrees Celsius, whichever is greater.

(2) The temperature monitor must provide a continuous gas temperature record.

(f) Concentrators. If you are using a concentrator such as a zeolite wheel or rotary carbon bed concentrator, you must comply with the requirements in paragraphs (f)(1) through (4) of this section.

(1) You must install a temperature monitor at the inlet to the desorption/reactivation zone of the concentrator. The temperature monitor must meet the requirements in paragraphs (a) and (c)(3) of this section.

(2) You must select an indicator(s) of performance of the desorption/reactivation fan operation, such as speed, power, static pressure, or flow rate.

(3) You must monitor the rotational speed of the concentrator in revolutions per hour.

(4) You must verify the performance of the adsorbent material by examining representative samples and testing adsorbent activity per the manufacturer's recommendations.

Compliance Requirements for the

Control Efficiency/Outlet Concentration Option

§63.3550 By what date must I conduct performance tests and other initial compliance demonstrations?

(a) New and reconstructed affected sources. For a new or reconstructed source, you must meet the requirements of paragraphs (a)(1) through (4) of this section.

(1) All emission capture systems, add-on control devices, and CPMS must be installed and operating no later

than the applicable compliance date specified in §63.3483. You must conduct a performance test of each capture system and add-on control device according to §§63.3553, 63.3554, and 63.3555 and establish the operating limits required by §63.3492 no later than 180 days after the applicable compliance date specified in §63.3483.

(2) You must develop and begin implementing the work practice plan required by §63.3493 no later than the compliance date specified in §63.3483.

(3) You must complete the initial compliance demonstration for the initial compliance period according to the requirements of §63.3551. The initial compliance period begins on the applicable compliance date specified in §63.3483 and ends on the last day of the 12th month following the compliance date. If the compliance date occurs on any day other than the first day of a month, then the initial compliance period extends through the end of that month plus the next 12 months. The initial compliance demonstration includes the results of emission capture system and add-on control device performance tests conducted according to §63.3553, 63.3554, and 63.3555; the operating limits established during the performance tests and the results of the continuous parameter monitoring

required by §63.3557; and documentation of whether you developed and implemented the work practice plan required by §63.3493.

(4) You do not need to comply with the operating limits for the emission capture system and add-on control device required by §63.3492 until after you have completed the performance tests specified in paragraph (a)(1) of this section. Instead, you must maintain a log detailing the operation and maintenance of the emission capture system, add-on control device, and continuous parameter monitors during the period between the compliance date and the performance test. You must begin complying with the operating limits on the date you complete the performance tests specified in paragraph (a)(1) of this section.

(b) Existing affected sources. For an existing affected source, you must meet the requirements of paragraphs (b)(1) through (3) of this section.

(1) All emission capture systems, add-on control devices, and CPMS must be installed and operating no later than the applicable compliance date specified in §63.3483.

(2) You must develop and begin implementing the work practice plan required by §63.3493 no later than the compliance date specified in §63.3483.

(3) You must complete the initial compliance demonstration for the initial compliance period according to the requirements of §63.3551. The initial compliance period begins on the applicable compliance date specified in §63.3483 and ends on the last day of the 12th month following the compliance date. If the compliance date occurs on any day other than the first day of a month, then the initial compliance period extends through the end of that month plus the next 12 months. The initial compliance demonstration includes the results of emission capture system and add-on control device performance tests conducted according to §§63.3553, 63.3554, and 63.3555; the operating limits established during the performance tests and the results of the continuous parameter monitoring required by §63.3557; and documentation of whether you developed and implemented the work practice plan required by §63.3493.

§63.3551 How do I demonstrate initial compliance?

(a) You may use the control efficiency/outlet concentration option for any coating operation, for any group of coating operations within a subcategory or coating type segment, or for all of the coating operations within a subcategory or coating type segment. You must

use the compliant material option, the emission rate without add-on controls option, or the emission rate with add-on controls option for any coating operation in the affected source for which you do not use the control efficiency/outlet concentration option. To demonstrate initial compliance, the coating operation(s) for which you use the control efficiency/outlet concentration option must meet the applicable levels of emission reduction in §63.3490. You must conduct a separate initial compliance demonstration for each one and two-piece draw and iron can body coating, sheetcoating, three-piece can body assembly coating, and end coating affected source. You must meet all the requirements of this section to demonstrate initial compliance with the emission limitations. When calculating the organic HAP emission rate according to this section, do not include any coatings or thinners used on coating operations for which you use the compliant material option, the emission rate without add-on controls option, or the emission rate with add-on controls option. You do not need to redetermine the mass of organic HAP in coatings or thinners that have been reclaimed onsite and reused in the coating operation(s) for which you use the emission rate with add-on controls option.

(b) Compliance with operating limits. You must establish and demonstrate continuous compliance during the initial compliance period with the operating limits required by §63.3492, using the procedures specified in §§63.3556 and 63.3557.

(c) Compliance with work practice requirements. You must develop, implement, and document your implementation of the work practice plan required by §63.3493 during the initial compliance period as specified in §63.3512.

(d) Compliance demonstration. To demonstrate initial compliance, the coating operation(s) for which you use the control efficiency/outlet concentration option must meet the applicable levels of emission reduction in §63.3490. You must keep all records applicable to the control efficiency/outlet concentration option as required by §§63.3512 and 63.3513. As part of the Notification of Compliance Status required by §63.3510, you must identify the coating operation(s) for which you used the control efficiency/outlet concentration option and submit a statement that the coating operation(s) was in compliance with the emission limitations during the initial compliance period because you achieved the operating limits required by §63.3492 and the work practice

standards required by §63.3493.

§63.3552 How do I demonstrate continuous compliance with the emission limitations?

(a) To demonstrate continuous compliance with the emission limitations using the control efficiency/outlet concentration option, the organic HAP emission rate for each compliance period must be equal to or less than 20 ppmvd or must be reduced by the amounts specified in §63.3490. A compliance period consists of 12 months. Each month after the end of the initial compliance period described in §63.3550 is the end of a compliance period consisting of that month and the preceding 11 months.

(b) You must demonstrate continuous compliance with each operating limit required by §63.3492 that applies to you, as specified in Table 4 to this subpart. If an operating parameter is out of the allowed range specified in Table 4 to this subpart, this is a deviation from the operating limit that must be reported as specified in §§63.3510(b)(6) and 63.3511(a)(7).

(c) You must meet the requirements for bypass lines in §63.3557(b). If any bypass line is opened and emissions are diverted to the atmosphere when the coating operation is running, this is a deviation that must be

reported as specified in §§63.3510(b)(6) and 63.3511(a)(7). For purposes of demonstrating compliance, you must treat the materials used during a deviation on a controlled coating operation as if they were used on an uncontrolled coating operation for the time period of the deviation.

(d) You must demonstrate continuous compliance with the work practice standards in §63.3493. If you did not develop a work practice plan or you did not implement the plan or you did not keep the records required by §63.3512(j)(8), this is a deviation from the work practice standards that must be reported as specified in §§63.3510(b)(6) and 63.3511(a)(7).

(e) As part of each semiannual compliance report required in §63.3511, you must identify the coating operation(s) for which you used the control efficiency/outlet concentration option. If there were no deviations from the operating limits or work practice standards, submit a statement that you were in compliance with the emission limitations during the reporting period because the organic HAP emission rate for each compliance period was less than 20 ppmvd or was reduced by the amount specified in §63.3490, and you achieved the operating

limits required by §63.3492 and the work practice standards required by §63.3493 during each compliance period.

(f) During periods of startup, shutdown, or malfunctions of the emission capture system, add-on control device, or coating operation that may affect emission capture or control device efficiency, you must operate in accordance with the SSMP required by §63.3500(c).

(g) Consistent with §§63.6(e) and 63.7(e)(1), deviations that occur during a period of startup, shutdown, or malfunction of the emission capture system, add-on control device, or coating operation that may affect emission capture or control device efficiency are not violations if you demonstrate to the Administrator's satisfaction that you were operating in accordance with the SSMP. The Administrator will determine whether deviations that occur during a period you identify as a startup, shutdown, or malfunction are violations, according to the provisions in §63.6(e).

(h) You must maintain records applicable to the control efficiency/outlet concentration option as specified in §§63.3512 and 63.3513.

§63.3553 What are the general requirements for performance tests?

(a) You must conduct each performance test required by §63.3550 according to the requirements of §63.7(e)(1) and under the conditions in this section unless you obtain a waiver of the performance test according to the provisions in §63.7(h).

(1) Representative coating operating conditions.

You must conduct the performance test under representative operating conditions for the coating operation(s). Operations during periods of startup, shutdown, or malfunction and during periods of nonoperation do not constitute representative conditions. You must record the process information that is necessary to document operating conditions during the test and explain why the conditions represent normal operation.

(2) Representative emission capture system and add-on control device operating conditions. You must conduct the performance test when the emission capture system and add-on control device are operating at a representative flow rate, and the add-on control device is operating at a representative inlet concentration. You must record information that is necessary to document emission capture

system and add-on control device operating conditions during the test and explain why the conditions represent normal operation.

(b) You must conduct each performance test of an emission capture system according to the requirements in §63.3554. You must conduct each performance test of an add-on control device according to the requirements in §63.3555.

§63.3554 How do I determine the emission capture system efficiency?

The capture efficiency of your emission capture system must be 100 percent to use the control efficiency/outlet concentration option. You may assume the capture system efficiency is 100 percent if both of the conditions in paragraphs (a) and (b) of this section are met.

(a) The capture system meets the criteria in Method 204 of appendix M to 40 CFR part 51 for a PTE and directs all the exhaust gases from the enclosure to an add-on control device.

(b) All coatings and thinners used in the coating operation are applied within the capture system, and coating solvent flash-off, curing, and drying occurs

within the capture system. This criterion is not met if parts enter the open shop environment when being moved between a spray booth and a curing oven.

§63.3555 How do I determine the outlet THC emissions and add-on control device emission destruction or removal efficiency?

You must use the procedures and test methods in this section to determine either the outlet THC emissions or add-on control device emission destruction or removal efficiency as part of the performance test required by §63.3550. You must conduct three test runs as specified in §63.7(e)(3), and each test run must last at least 1 hour.

(a) For all types of add-on control devices, use the test methods specified in paragraphs (a)(1) through (5) of this section.

(1) Use Method 1 or 1A of appendix A to 40 CFR part 60, as appropriate, to select sampling sites and velocity traverse points.

(2) Use Method 2, 2A, 2C, 2D, 2F, or 2G of appendix A to 40 CFR part 60, as appropriate, to measure gas volumetric flow rate.

(3) Use Method 3, 3A, or 3B of appendix A to 40 CFR

part 60, as appropriate, for gas analysis to determine dry molecular weight. You may also use as an alternative to Method 3B, the manual method for measuring the oxygen, carbon dioxide, and carbon monoxide content of exhaust gas in ANSI/ASME PTC 19.10-1981, "Flue and Exhaust Gas Analyses [Part 10, Instruments and Apparatus]" (incorporated by reference, see §63.14).

(4) Use Method 4 of appendix A to 40 CFR part 60 to determine stack gas moisture.

(5) Methods for determining gas volumetric flow rate, dry molecular weight, and stack gas moisture must be performed, as applicable, during each test run.

(b) Measure total gaseous organic mass emissions as carbon at the inlet and outlet of the add-on control device simultaneously using either Method 25 or 25A of appendix A to 40 CFR part 60 as specified in paragraphs (b)(1) through (3) of this section. You must use the same method for both the inlet and outlet measurements.

(1) Use Method 25 of appendix A to 40 CFR part 60 if the add-on control device is an oxidizer, and you expect the total gaseous organic concentration as carbon to be more than 50 ppm at the control device outlet.

(2) Use Method 25A of appendix A to 40 CFR part 60

if the add-on control device is an oxidizer, and you expect the total gaseous organic concentration as carbon to be 50 ppm or less at the control device outlet.

(3) Use Method 25A of appendix A to 40 CFR part 60 if the add-on control device is not an oxidizer.

(4) You may use Method 18 of appendix A to 40 CFR part 60 to subtract methane emissions from measured total gaseous organic mass emissions as carbon.

(5) Alternatively, any other test method or data that have been validated according to the applicable procedures in Method 301 of 40 CFR part 63, appendix A, and approved by the Administrator may be used.

(c) If two or more add-on control devices are used for the same emission stream, then you must measure emissions at the outlet of each device. For example, if one add-on control device is a concentrator with an outlet for the high-volume dilute stream that has been treated by the concentrator and a second add-on control device is an oxidizer with an outlet for the low-volume, concentrated stream that is treated with the oxidizer, you must measure emissions at the outlet of the oxidizer and the high-volume dilute stream outlet of the concentrator.

(d) For each test run, determine the total gaseous

organic emissions mass flow rates for the inlet and outlet of the add-on control device using Equation 1 of this section. If there is more than one inlet or outlet to the add-on control device, you must calculate the total gaseous organic mass flow rate using Equation 1 of this section for each inlet and each outlet and then total all of the inlet emissions and total all of the outlet emissions.

$$M_f = Q_{sd}C_c(12)(0.0416)(10^{-6}) \quad (\text{Eq. 1})$$

Where:

- M_f = Total gaseous organic emissions mass flow rate, kg/h.
- C_c = The concentration of organic compounds as carbon in the vent gas, as determined by Method 25 or Method 25A, ppmvd.
- Q_{sd} = Volumetric flow rate of gases entering or exiting the add-on control device, as determined by Method 2, 2A, 2C, 2D, 2F, or 2G, dry standard cubic meters/hour (dscm/h).
- 0.0416 = Conversion factor for molar volume, kg-moles per cubic meter (mol/m^3) (@ 293 Kelvin (K) and 760 millimeters of mercury (mmHg)).

Note: If M_f is calculated in English units (lb/h), the conversion factor for molar volume is 0.00256 lb-moles per cubic foot (mol/ft^3).

(e) For each test run, determine the add-on control device organic emissions destruction or removal efficiency using Equation 2 of this section.

$$\text{DRE} = 100 \times \frac{M_{fi} - M_{fo}}{M_{fi}} \quad (\text{Eq. 2})$$

Where:

DRE = Organic emissions destruction or removal efficiency of the add-on control device, percent.

M_{fi} = Total gaseous organic emissions mass flow rate at the inlet(s) to the add-on control device, using Equation 1 of this section, kg/h.

M_{fo} = Total gaseous organic emissions mass flow rate at the outlet(s) of the add-on control device, using Equation 1 of this section, kg/h.

(f) Determine the emission destruction or removal efficiency of the add-on control device as the average of the efficiencies determined in the three test runs and calculated in Equation 2 of this section.

§63.3556 How do I establish the emission capture system and add-on control device operating limits during the performance test?

During the performance test required by §63.3550 and described in §§63.3553, 63.3554, and 63.3555, you must establish the operating limits required by §63.3492 according to this section, unless you have received approval for alternative monitoring and operating limits under §63.8(f) as specified in §63.3492.

(a) Thermal oxidizers. If your add-on control

device is a thermal oxidizer, establish the operating limits according to paragraphs (a)(1) and (2) of this section.

(1) During the performance test, you must monitor and record the combustion temperature at least once every 15 minutes during each of the three test runs. You must monitor the temperature in the firebox of the thermal oxidizer or immediately downstream of the firebox before any substantial heat exchange occurs.

(2) Use the data collected during the performance test to calculate and record the average combustion temperature maintained during the performance test. That average combustion temperature is the minimum operating limit for your thermal oxidizer.

(b) Catalytic oxidizers. If your add-on control device is a catalytic oxidizer, establish the operating limits according to either paragraphs (b)(1) and (2) or paragraphs (b)(3) and (4) of this section.

(1) During the performance test, you must monitor and record the temperature at the inlet to the catalyst bed and the temperature difference across the catalyst bed at least once every 15 minutes during each of the three test runs.

(2) Use the data collected during the performance test to calculate and record the average temperature at the inlet to the catalyst bed and the average temperature difference across the catalyst bed maintained during the performance test. The average temperature difference is the minimum operating limit for your catalytic oxidizer.

(3) As an alternative to monitoring the temperature difference across the catalyst bed, you may monitor the temperature at the inlet to the catalyst bed and implement a site-specific inspection and maintenance plan for your catalytic oxidizer as specified in paragraph (b)(4) of this section. During the performance test, you must monitor and record the temperature at the inlet to the catalyst bed at least once every 15 minutes during each of the three test runs. Use the data collected during the performance test to calculate and record the average temperature at the inlet to the catalyst bed during the performance test. That is the minimum operating limit for your catalytic oxidizer.

(4) You must develop and implement an inspection and maintenance plan for your catalytic oxidizer(s) for which you elect to monitor according to paragraph (b)(3) of this section. The plan must address, at a minimum, the

elements specified in paragraphs (b)(4)(i) through (iii) of this section.

(i) Annual sampling and analysis of the catalyst activity (i.e, conversion efficiency) following the manufacturer's or catalyst supplier's recommended procedures.

(ii) Monthly inspection of the oxidizer system, including the burner assembly and fuel supply lines for problems and, as necessary, adjust the equipment to assure proper air-to-fuel mixtures.

(iii) Annual internal and monthly external visual inspection of the catalyst bed to check for channeling, abrasion, and settling. If problems are found, you must take corrective action consistent with the manufacturer's recommendations and conduct a new performance test to determine destruction efficiency according to §63.3555.

(c) Regenerative oxidizers. If your add-on control device is a regenerative oxidizer, establish operating limits according to paragraphs (c)(1) and (2) of this section.

(1) You must establish all applicable operating limits according to paragraphs (a) and (b) of this section.

(2) You must submit a valve inspection plan that documents the steps taken to minimize the amount of leakage during the regenerative process. This plan can include, but is not limited to, routine inspection of key parameters of the valve operating system (e.g., solenoid valve operation, air pressure, hydraulic pressure), visual inspection of the valves during internal inspections, and/or actual testing of the emission stream for leakage.

(d) Carbon adsorbers. If your add-on control device is a carbon adsorber, establish the operating limits according to paragraphs (d)(1) and (2) of this section.

(1) You must monitor and record the total regeneration desorbing gas (e.g., steam or nitrogen) mass flow for each regeneration cycle, and the carbon bed temperature after each carbon bed regeneration and cooling cycle for the regeneration cycle either immediately preceding or immediately following the performance test.

(2) The operating limits for your carbon adsorber are the minimum total desorbing gas mass flow recorded during the regeneration cycle and the maximum carbon bed temperature recorded after the cooling cycle.

(e) Condensers. If your add-on control device is a condenser, establish the operating limits according to

paragraphs (e)(1) and (2) of this section.

(1) During the performance test, monitor and record the condenser outlet (product side) gas temperature at least once every 15 minutes during each of the three test runs.

(2) Use the data collected during the performance test to calculate and record the average condenser outlet (product side) gas temperature maintained during the performance test. This average condenser outlet gas temperature is the maximum operating limit for your condenser.

(f) Concentrators. If your add-on control device includes a concentrator, you must establish operating limits for the concentrator according to paragraphs (f)(1) through (7) of this section.

(1) During the performance test, monitor and record the inlet temperature to the desorption/reactivation zone of the concentrator at least once every 15 minutes during each of the three runs of the performance test.

(2) Use the data collected during the performance test to calculate and record the average temperature. This is the minimum operating limit for the desorption/reactivation zone inlet temperature.

(3) During the performance test, monitor and record an indicator(s) of performance for the desorption/reactivation fan operation at least once every 15 minutes during each of the three runs of the performance test. The indicator can be speed in rpm, power in amps, static pressure, or flow rate.

(4) Establish a suitable range for the parameter(s) selected based on the system design specifications, historical data, and/or data obtained concurrent with an emissions performance test. This is the operation limit range for the desorption/reactivation fan operation.

(5) During the performance test, monitor the rotational speed of the concentrator at least once every 15 minutes during each of the three runs of the performance test.

(6) Use the data collected during the performance test to calculate and record the average rotational speed. This is the minimum operating limit for the rotational speed of the concentrator. However, the indicator range for the rotational speed may be changed if an engineering evaluation is conducted and a determination made that the change in speed will not affect compliance with the emission limit.

(7) Develop and implement an inspection and maintenance plan for the concentrator(s) that you elect to monitor according to paragraph (f) of this section. The plan must include, at a minimum, annual sampling and analysis of the absorbent material (i.e., adsorbent activity) following the manufacturer's recommended procedures.

(g) Emission capture systems. For each capture device that is part of a PTE that meets the criteria of §63.3554, the operating limit for a PTE is specified in Table 4 to this subpart.

§63.3557 What are the requirements for continuous parameter monitoring system installation, operation, and maintenance?

(a) General. You must install, operate, and maintain each CPMS specified in paragraphs (c), (e), (f), and (g) of this section according to paragraphs (a)(1) through (6) of this section. You must install, operate, and maintain each CPMS specified in paragraphs (b) and (d) of this section according to paragraphs (a)(3) through (5) of this section.

(1) The CPMS must complete a minimum of one cycle of operation for each successive 15-minute period. You must

have a minimum of four equally spaced successive cycles of CPMS operation in 1 hour.

(2) You must determine the average of all recorded readings for each successive 3-hour period of the emission capture system and add-on control device operation.

(3) You must record the results of each inspection, calibration, and validation check of the CPMS.

(4) You must maintain the CPMS at all times and have available necessary parts for routine repairs of the monitoring equipment.

(5) You must operate the CPMS and collect emission capture system and add-on control device parameter data at all times that a controlled coating operation is operating, except during monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, if applicable, calibration checks and required zero and span adjustments).

(6) You must not use emission capture system or add-on control device parameter data recorded during monitoring malfunctions, associated repairs, out of control periods, or required quality assurance or control activities when calculating data averages. You must use all the data collected during all other periods in

calculating the data averages for determining compliance with the emission capture system and add-on control device operating limits.

(7) A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the CPMS to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions. Any period for which the monitoring system is out of control and data are not available for required calculations is a deviation from the monitoring requirements.

(b) Capture system bypass line. You must meet the requirements of paragraph (b)(1) or (2) of this section for each emission capture system that contains bypass lines that could divert emissions away from the add-on control device to the atmosphere.

(1) Properly install, maintain, and operate a flow indicator that takes a reading at least once every 15 minutes. The flow indicator shall be installed at the entrance to any bypass line.

(2) Secure the bypass line valve in the nondiverting position with a car-seal or lock-and-key type configuration. A visual inspection of the seal or closure

mechanism shall be performed at least once every month to ensure the valve is maintained in the nondiverting position, and the vent stream is not diverted through the bypass line.

(c) Thermal oxidizers and catalytic oxidizers. If you are using a thermal oxidizer or catalytic oxidizer as an add-on control device (including those used with concentrators or with carbon adsorbers to treat desorbed concentrate streams), you must comply with the requirements in paragraphs (c)(1) through (3) of this section.

(1) For a thermal oxidizer, install a gas temperature monitor in the firebox of the thermal oxidizer or in the duct immediately downstream of the firebox before any substantial heat exchange occurs.

(2) For a catalytic oxidizer, install a gas temperature monitor according to paragraph (c)(2)(i) or (ii) of this section.

(i) If you establish operating limits according to §63.3556(b)(1) and (2), then you must install the gas temperature monitors both upstream and downstream of the catalyst bed. The temperature monitors must be in the gas stream at the inlet to and the outlet of the catalyst bed

to measure the temperature difference across the bed.

(ii) If you establish operating limits according to §63.3556(b)(3) and (4), then you must install a gas temperature monitor upstream of the catalyst bed. The temperature monitor must be in the gas stream at the inlet to the catalyst bed to measure the temperature.

(3) For all thermal oxidizers and catalytic oxidizers, you must meet the requirements in paragraphs (a) and (c)(3)(i) through (ii) of this section for each gas temperature monitoring device.

(i) Locate the temperature sensor in a position that provides a representative temperature.

(ii) Use a temperature sensor with a minimum accuracy of ± 1.2 degrees Celsius or ± 1 percent of the temperature value in degrees Celsius, whichever is larger.

(d) Carbon adsorbers. If you are using a carbon adsorber as an add-on control device, you must monitor the total regeneration desorbing gas (e.g., steam or nitrogen) mass flow for each regeneration cycle, the carbon bed temperature after each regeneration and cooling cycle, and comply with paragraphs (a)(3) through (5) and (d)(1) and (2) of this section.

(1) The regeneration desorbing gas mass flow monitor

must be an integrating device having an accuracy of ± 10 percent capable of recording the total regeneration desorbing gas mass flow for each regeneration cycle.

(2) The carbon bed temperature monitor must have a minimum accuracy of ± 1.2 degrees Celsius or ± 1 percent of the temperature value in degrees Celsius, whichever is larger, and must be capable of recording the temperature within 15 minutes of completing any carbon bed cooling cycle.

(e) Condensers. If you are using a condenser, you must monitor the condenser outlet (product side) gas temperature and comply with paragraphs (a) and (e)(1) and (2) of this section.

(1) The gas temperature monitor must have a minimum accuracy of ± 1.2 degrees Celsius or ± 1 percent of the temperature value in degrees Celsius, whichever is larger.

(2) The temperature monitor must provide a continuous gas temperature record.

(f) Concentrators. If you are using a concentrator such as a zeolite wheel or rotary carbon bed concentrator, you must comply with the requirements in paragraphs (f)(1) through (4) of this section.

(1) You must install a temperature monitor at the

inlet to the desorption/reactivation zone of the concentrator. The temperature monitor must meet the requirements in paragraphs (a) and (c)(3) of this section.

(2) You must select an indicator(s) of performance of the desorption/reactivation fan operation, such as speed, power, static pressure, or flow rate.

(3) You must monitor the rotational speed of the concentrator in revolutions per hour.

(4) You must verify the performance of the adsorbent material by examining representative samples and testing adsorbent activity per the manufacturer's recommendations.

Other Requirements and Information

§63.3560 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by us, the United States Environmental Protection Agency (U.S. EPA), or a delegated authority such as your State, local, or tribal agency. If the Administrator has delegated authority to your State, local, or tribal agency, then that agency, in addition to the EPA, has the authority to implement and enforce this subpart. You should contact your EPA Regional Office to find out if implementation and enforcement of this subpart is

delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under 40 CFR part 63, subpart E, the authorities contained in paragraph (c) of this section are retained by the EPA Administrator and are not transferred to the State, local, or tribal agency.

(c) The authorities that will not be delegated to State, local, or tribal agencies are listed in paragraphs (c)(1) through (4) of this section.

(1) Approval of alternatives to the work practice standards in §63.3493.

(2) Approval of major alternatives to test methods under §63.7(e)(2)(ii) and (f) and as defined in §63.90.

(3) Approval of major alternatives to monitoring under §63.8(f) and as defined in §63.90.

(4) Approval of major alternatives to recordkeeping and reporting under §63.10(f) and as defined in §63.90.

§63.3561 What definitions apply to this subpart?

Terms used in this subpart are defined in the CAA, in 40 CFR 63.2, the General Provisions of this part, and in this section as follows:

Add-on control means an air pollution control device,

such as a thermal oxidizer or carbon adsorber, that reduces pollution in an air stream by destruction or removal before discharge to the atmosphere.

Adhesive means any chemical substance that is applied for the purpose of bonding two surfaces together.

Aerosol can means any can into which a pressurized aerosol product is packaged.

Aseptic coating means any coating that must withstand high temperature steam, chemicals, or a combination of both used to sterilize food cans prior to filling.

Can body means a formed metal can, excluding the unattached end(s).

Can end means a can part manufactured from metal substrate equal to or thinner than 0.3785 millimeters (mm) (0.0149 inch) for the purpose of sealing the ends of can bodies including nonmetal or composite can bodies.

Capture device means a hood, enclosure, room, floor sweep, or other means of containing or collecting emissions and directing those emissions into an add-on air pollution control device.

Capture efficiency or capture system efficiency means the portion (expressed as a percentage) of the pollutants from an emission source that is delivered to an add-on

control device.

Capture system means one or more capture devices intended to collect emissions generated by a coating operation in the use of coatings or cleaning materials, both at the point of application and at subsequent points where emissions from the coatings or cleaning materials occur, such as flash-off, drying, or curing. As used in this subpart, multiple capture devices that collect emissions generated by a coating operation are considered a single capture system.

Cleaning material means a solvent used to remove contaminants and other materials such as dirt, grease, oil, and dried or wet coating (e.g., depainting) from a substrate before or after coating application or from equipment associated with a coating operation, such as spray booths, spray guns, racks, tanks, and hangers. Thus, it includes any cleaning material used on substrates or equipment or both.

Coating means a material applied to a substrate for decorative, protective, or functional purposes. Such materials include, but are not limited to, paints, sealants, caulks, inks, adhesives, and maskants. Fusion pastes, ink jet markings, mist solutions, and lubricants,

as well as decorative, protective, or functional materials that consist only of protective oils for metal, acids, bases, or any combination of these substances, are not considered coatings for the purposes of this subpart.

Coating operation means equipment used to apply coating to a metal can or end (including decorative tins), or metal crown or closure, and to dry or cure the coating after application. A coating operation always includes at least the point at which a coating is applied and all subsequent points in the affected source where organic HAP emissions from that coating occur. There may be multiple coating operations in an affected source. Coating application with hand-held nonrefillable aerosol containers, touch-up markers, or marking pens is not a coating operation for the purposes of this subpart.

Coating solids means the nonvolatile portion of a coating that makes up the dry film.

Continuous parameter monitoring system (CPMS) means the total equipment that may be required to meet the data acquisition and availability requirements of this subpart; used to sample, condition (if applicable), analyze, and provide a record of coating operation, capture system, or add-on control device parameters.

Controlled coating operation means a coating operation from which some or all of the organic HAP emissions are routed through an emission capture system and add-on control device.

Crowns and closures means steel or aluminum coverings such as bottle caps and jar lids for containers other than can ends.

Decorative tin means a single-walled container, designed to be covered or uncovered that is manufactured from metal substrate equal to or thinner than 0.3785 mm (0.0149 inch) and is normally coated on the exterior surface with decorative coatings. Decorative tins may contain foods but are not hermetically sealed and are not subject to food processing steps such as retort or pasteurization. Interior coatings are not usually applied to protect the metal and contents from chemical interaction.

Deviation means any instance in which an affected source subject to this subpart or an owner or operator of such a source:

(1) Fails to meet any requirement or obligation established by this subpart including but not limited to any emission limit, operating limit, or work practice

standard;

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or

(3) Fails to meet any emission limit, operating limit, or work practice standard in this subpart during startup, shutdown, or malfunction regardless of whether or not such failure is permitted by this subpart.

Drum means a cylindrical metal container with walls of 29 gauge or thicker and a capacity greater than 45.4 liters (12 gal).

Emission limitation means an emission limit, operating limit, or work practice standard.

Enclosure means a structure that surrounds a source of emissions and captures and directs the emissions to an add-on control device.

End coating means the application of end seal compound or repair spray on can ends during manufacturing.

End seal compound means the coating applied onto ends of cans that functions to seal the end(s) of a can to the can body.

Exempt compound means a specific compound that is not

considered a VOC due to negligible photochemical reactivity. The exempt compounds are listed in 40 CFR 51.100(s).

Food can means any can manufactured to contain edible products and designed to be hermetically sealed. Does not include decorative tins.

Fusion paste means a material used to attach nozzles and other miscellaneous parts to general line cans.

General line can means any can manufactured to contain inedible products. Does not include aerosol cans or decorative tins.

Ink jet marking means the ink and makeup fluid used for date code and other identification markings on a can for the marking on a can indicating when food in a can has completed the retort process.

Inside spray means a coating sprayed on the interior of a can body to provide a protective film between the can and its contents.

Lubricant means an organic liquid used as a lubricating agent to facilitate the handling and fabrication (e.g., tab making, stamping, or necking) of can bodies or ends.

Manufacturer's formulation data means data on a

material (such as a coating) that are supplied by the material manufacturer based on knowledge of the ingredients used to manufacture that material, rather than based on testing of the material with the test methods specified in §63.3521. Manufacturer's formulation data may include, but are not limited to, information on density, organic HAP content, volatile organic matter content, and coating solids content.

Mass fraction of organic HAP means the ratio of the mass of organic HAP to the mass of a material in which it is contained, expressed as kg of organic HAP per kg of material.

Metal can means a single-walled container manufactured from metal substrate equal to or thinner than 0.3785 mm (0.0149 inch).

Mist solution means a hydrocarbon or aqueous solution used as an application aid with solvent-based or waterborne end seal compounds to prevent compound accumulation on the lining nozzle.

Month means a calendar month or a pre-specified period of 28 days to 35 days to allow for flexibility in recordkeeping when data are based on a business accounting period.

Nonaseptic coating means any coating that is not subjected to high temperature steam, chemicals, or a combination of both to sterilize food cans prior to filling.

One and two-piece draw and iron can means a steel or aluminum can manufactured by the draw and iron process. Includes two-piece beverage cans, two-piece food cans, and one-piece aerosol cans.

One-piece aerosol can means an aerosol can formed by the draw and iron process to which no ends are attached and a valve is placed directly on top.

Organic HAP content means the mass of organic HAP per volume of coating solids for a coating, calculated using Equation 1 of §63.3521. The organic HAP content is determined for the coating in the condition it is in when received from its manufacturer or supplier and does not account for any alteration after receipt.

Pail means a cylindrical or rectangular metal container with walls of 29 gauge or thicker and a capacity of 7.6 to 45.4 liters (2 to 12 gal) (for example, bucket).

Permanent total enclosure (PTE) means a permanently installed enclosure that meets the criteria of Method 204 of appendix M, 40 CFR part 51, for a PTE and that directs

all the exhaust gases from the enclosure to an add-on control device.

Protective oil means an organic material that is applied to metal for the purpose of providing lubrication or protection from corrosion without forming a solid film. This definition of protective oil includes, but is not limited to, lubricating oils, evaporative oils (including those that evaporate completely), and extrusion oils.

Repair spray means a spray coating for post-formed easy-open ends to provide additional protection in the scored areas by covering breaks at the score location or to provide an additional layer of protective coating on the interior of the end for corrosion resistance.

Research or laboratory equipment means any equipment that is being used to conduct research and development of new processes and products, when such equipment is operated under the close supervision of technically trained personnel and is not engaged in the manufacture of final or intermediate products for commercial purposes, except in a de minimis manner.

Responsible official means responsible official as defined in 40 CFR 70.2.

Sheetcoating means a can manufacturing coating

process that involves coating of flat metal sheets before they are formed into cans.

Side seam stripe means a coating applied to the interior and/or exterior of the welded or soldered seam of a three-piece can body to protect the exposed metal.

Startup, initial means the first time equipment is brought online in a facility.

Surface preparation means use of a cleaning material on a portion of or all of a substrate. That includes use of a cleaning material to remove dried coating which is sometimes called "depainting."

Temporary total enclosure (TTE) means an enclosure constructed for the purpose of measuring the capture efficiency of pollutants emitted from a given source as defined in Method 204 of appendix M, 40 CFR part 51.

Thinner means an organic solvent that is added to a coating after the coating is received from the supplier.

Three-piece aerosol can means a steel aerosol can formed by the three-piece can assembly process manufactured to contain food or nonfood products.

Three-piece can assembly means the process of forming a flat metal sheet into a shaped can body which may include the processes of necking, flanging, beading, and

seaming and application of a side seam stripe and/or an inside spray coating.

Three-piece food can means a steel can formed by the three-piece can assembly process manufactured to contain edible products and designed to be hermetically sealed.

Total volatile hydrocarbon (TVH) means the total amount of nonaqueous volatile organic matter determined according to Methods 204 and 204A through 204F of appendix M to 40 CFR part 51 and substituting the term TVH each place in the methods where the term VOC is used. The TVH includes both VOC and non-VOC.

Two-piece beverage can means a two-piece draw and iron can manufactured to contain drinkable liquids such as beer, soft drinks, or fruit juices.

Two-piece food can means a steel or aluminum can manufactured by the draw and iron process and designed to contain edible products other than beverages and to be hermetically sealed.

Uncontrolled coating operation means a coating operation from which none of the organic HAP emissions are routed through an emission capture system and add-on control device.

Volatile organic compound (VOC) means any compound

defined as VOC in 40 CFR 51.100(s).

Volume fraction of coating solids means the ratio of the volume of coating solids (also known as volume of nonvolatiles) to the volume of coating; liters of coating solids per liter of coating.

Wastewater means water that is generated in a coating operation and is collected, stored, or treated prior to being discarded or discharged.

Tables to Subpart KKKK of Part 63

Table 1 to Subpart KKKK of Part 63. Emission Limits for New or Reconstructed Affected Sources

You must comply with the emission limits that apply to your affected source in the following table as required by §63.3490(a) through (c).

If you apply surface coatings to metal cans or metal can parts in this subcategory...	then for all coatings of this type...	you must meet the following organic HAP emission limit in kg HAP/liter solids (lbs HAP/gal solids) ^{a,b} :
1. One and two-piece draw and iron can body coating	a. two-piece beverage cans - all coatings	0.04 (0.31)
	b. two-piece food cans - all coatings	0.06 (0.50)
	c. one-piece aerosol cans - all coatings	0.08 (0.65)
2. Sheetcoating	sheetcoating	0.02 (0.17)
3. Three-piece can assembly	a. inside spray	0.12 (1.03)
	b. aseptic side seam stripes on food cans	1.48 (12.37)
	c. nonaseptic side seam stripes on food cans	0.72 (5.96)
	d. side seam stripes on general line nonfood cans	1.18 (9.84)

	e. side seam stripes on aerosol cans	1.46 (12.14)
4. End coating	a. aseptic end seal compounds	0.06 (0.54)
	b. nonaseptic end seal compounds	0.00 (0.00)
	c. repair spray coatings	0.64 (5.34)

a If you apply surface coatings of more than one type within any one subcategory you may calculate an OSEL according to §63.3531(i).

b Rounding differences in specific emission limits are attributable to unit conversions.

Table 2 to Subpart KKKK of Part 63. Emission Limits for Existing Affected Sources

You must comply with the emission limits that apply to your affected source in the following table as required by §63.3490(a) through (c).

If you apply surface coatings to metal cans or metal can parts in this subcategory...	then for all coatings of this type...	you must meet the following organic HAP emission limit in kg HAP/liter solids (lbs HAP/gal solids)^{a,b}:
1. One and two-piece draw and iron can body coating	a. two-piece beverage cans - all coatings	0.07 (0.59)
	b. two-piece food cans - all coatings	0.06 (0.51)

	c. one-piece aerosol cans - all coatings	0.12 (0.99)
2. Sheetcoating	sheetcoating	0.03 (0.26)
3. Three-piece can assembly	a. inside spray	0.29 (2.43)
	b. aseptic side seam stripes on food cans	1.94 (16.16)
	c. nonaseptic side seam stripes on food cans	0.79 (6.57)
	d. side seam stripes on general line nonfood cans	1.18 (9.84)
	e. side seam stripes on aerosol cans	1.46 (12.14)
4. End coating	a. aseptic end seal compounds	0.06 (0.54)
	b. nonaseptic end seal compounds	0.00 (0.00)
	c. repair spray coatings	2.06 (17.17)

a If you apply surface coatings of more than one type within any one subcategory you may calculate an OSEL according to §63.3531(i).

b Rounding differences in specific emission limits are attributable to unit conversions.

Table 3 to Subpart KKKK of Part 63. Emission Limits for Affected Sources Using the Control Efficiency/Outlet Concentration Compliance Option

You must comply with the emission limits that apply to your affected source in the following table as required by §63.3490(d).

If you use the control efficiency/outlet concentration option to comply with the emission limitations for any coating operation(s)...	then you must comply with one of the following by using an emissions control system to...
1. in a new or reconstructed affected source	a. reduce emissions of total HAP, measured as THC (as carbon),^a by 97 percent; or
	b. limit emissions of total HAP, measured as THC (as carbon)^a to 20 ppmvd at the control device outlet and use a PTE.
2. in an existing affected source	a. reduce emissions of total HAP, measured as THC (as carbon),^a by 95 percent; or
	b. limit emissions of total HAP, measured as THC (as carbon)^a to 20 ppmvd at the control device outlet and use a PTE.

^a You may choose to subtract methane from THC as carbon measurements.

Table 4 to Subpart KKKK of Part 63. Operating Limits if Using the Emission Rate with Add-on Controls Option or the Control Efficiency/Outlet Concentration Compliance Option

If you are required to comply with operating limits by §63.3492, you must comply with the applicable operating limits in the following table.

For the following device...	you must meet the following operating limit...	and you must demonstrate continuous compliance with the operating limit by...
1. thermal oxidizer	a. the average combustion temperature in each 3-hour block period must not fall below the combustion temperature limit established according to §63.3546(a) or §63.3556(a).	i. collecting the combustion temperature data according to §63.3547(c) or §63.3557(c);
		ii. reducing the data to 3-hour block averages; and
		iii. maintaining the 3-hour block average combustion temperature at or above the temperature limit established according to §63.3546(a) or §6.3556(a).

2. catalytic oxidizer	a. the average temperature difference across the catalyst bed in each 3-hour period does not fall below the temperature difference limit established according to §63.3546(b)(2) or §63.3556(b)(2); or	i. collecting the temperature data according to §63.3547(c) or §6.3578(c);
		ii. reducing the data to 3-hour block averages; and
		iii. maintaining the 3-hour block average temperature difference at or above the temperature difference limit established according to §63.3546(b)(2) or §6.3556(b)(2).
	b. the average temperature measured at the inlet to the catalyst bed in each 3-hour block period must not fall below the limit established according to §63.3546(b) or §63.3556(b); and	i. collecting the temperature data according to §63.3547(c) or §63.3557(c); and
		ii. reducing the data to 3-hour block averages, and
		iii. maintaining the 3-hour block average temperature at the inlet to the catalyst bed at or above the temperature limit established according to §63.3546(b) or §6.3556(b).

	<p>c. develop and implement an inspection and maintenance plan according to §63.3546(b)(4) or §63.3556(b)(4).</p>	<p>maintaining an up-to-date inspection plan, records of annual catalyst activity checks, records of monthly inspections of the oxidizer system, and records of the annual internal inspections of the catalyst bed. If a problem is discovered during a monthly or annual inspection required by §63.3546(b)(4) or §63.3556(b)(4), you must take corrective action as soon as practicable consistent with the manufacturer's recommendations.</p>
<p>3. regenerative oxidizers</p>	<p>a. develop and implement a valve inspection plan according to §63.3546(c) or §63.3556(c); and either</p>	<p>maintaining an up-to-date valve inspection plan. If a problem is discovered during an inspection required by §63.3546(c) or §63.3556(c), you must take corrective action as soon as practicable.</p>
	<p>b. if you are using a regenerative thermal oxidizer, follow the operating limits according to 1.a of this table; or</p>	<p>See all applicable items in 1.a of this table.</p>

	<p>c. if you are using a regenerative catalytic oxidizer, follow the operating limits according to item 2.a of this table.</p>	<p>See all applicable items in 2.a, 2.b, and 2.c of this table.</p>
<p>4. carbon adsorber</p>	<p>a. the total regeneration desorbing gas (e.g., steam or nitrogen) mass flow for each carbon bed regeneration cycle must not fall below the total regeneration desorbing gas mass flow limit established according to §63.3546(d) or §63.3556(d).</p>	<p>i. measuring the total regeneration desorbing gas (e.g., steam or nitrogen) mass flow for each regeneration cycle according to §63.3547(d) or §63.3557(d); and</p>
		<p>ii. maintaining the total regeneration desorbing gas mass flow at or above the mass flow limit.</p>

	<p>b. the temperature of the carbon bed, after completing each regeneration and any cooling cycle, must not exceed the carbon bed temperature limit established according to §63.3546(d) or §63.3556(d).</p>	<p>i. measuring the temperature of the carbon bed, after completing each regeneration and any cooling cycle, according to §63.3547(d) or §63.3557(d); and</p> <hr/> <p>ii. operating the carbon beds such that each carbon bed is not returned to service until completing each regeneration and any cooling cycle until the recorded temperature of the carbon bed is at or below the temperature limit.</p>
<p>5. condenser</p>	<p>a. the average condenser outlet (product side) gas temperature in each 3-hour period must not exceed the temperature limit established</p>	<p>i. collecting the condenser outlet (product side) gas temperature according to §63.3547(e) or §63.3557(e);</p> <hr/> <p>ii. reducing the data to 3-hour block averages; and</p>

according to §63.3546(e) or §63.3556(e).

		iii. maintaining the 3-hour block average gas temperature at the outlet at or below the temperature limit.
6. concentrators, including zeolite wheels and rotary carbon adsorbers	a. the average inlet temperature measured from the desorption/ reactivation zone in each 3-hour block period must not fall below the limit established according to §63.3546(f) or §63.3556(f).	i. collecting the temperature data according to §63.3547(f) or §63.3557(f);
		ii. Reducing the data to 3-hour block averages; and
		iii. Maintaining the 3-hour block average temperature at or above the temperature limit.
	b. the indicator of performance for the desorption/ reactivation fan operation in each 3-hour block period must not fall outside of the range established according to §63.3546(f) or §63.3556(f).	i. collecting the indicator data according to §63.3547(f) or §63.3557(f); and ii. maintaining the indicator data within the range established.

<p>c. the nominal rotational speed of the concentrator in each 3-hour block period must not fall below the speed established according to §63.3546(f) or §63.3556(f).</p>	<p>i. collecting the rotational speed according to §63.3547(f) or §63.3557(f);</p>
	<p>ii. reducing the speed data to 3-hour block averages; and</p>
	<p>iii. maintaining the 3-hour block average speed at or above the rotational speed limit.</p>
<p>d. develop and implement an inspection and maintenance plan according to §63.3546(f)(3) or §63.3556(f)(3).</p>	<p>maintaining an up-to-date inspection plan, and records of annual adsorbent activity checks. The results shall be compared to historical results and/or results for new adsorbents. If a problem is discovered during the annual inspection required by §63.3546(f)(3) or §63.3556(f)(3), you must take corrective action as soon as practicable consistent with the manufacturer's recommendations.</p>

<p>7. emission capture system that is a PTE according to §63.3544(a) or §63.3554(a)</p>	<p>a. the direction of the air flow at all times must be into the enclosure; and either</p>	<p>i. collecting the direction of air flow, and either the facial velocity of air through all natural draft openings or the pressure drop across the enclosure; and</p>
		<p>ii. maintaining the facial velocity of air flow through all natural draft openings or the pressure drop at or above the facial velocity limit or pressure drop limit, and maintaining the direction of air flow into the enclosure at all times.</p>
	<p>b. the average facial velocity of air through all natural draft openings in the enclosure must be at least 200 feet per minute; or</p>	<p>see items 7.a.i and ii of this table.</p>
	<p>c. the pressure drop across the enclosure must be at least 0.007 inch H₂O, as established in Method 204 of appendix M to 40 CFR part 51.</p>	<p>see items 7.a.i and ii of this table.</p>

<p>8. emission capture system that is not a PTE according to §63.3544(a)</p>	<p>a. the average gas volumetric flow rate or duct static pressure in each duct between a capture device and add-on control device inlet in each 3-hour period must not fall below the average volumetric flow rate or duct static pressure limit established for that capture device according to §63.3546(g) .</p>	<p>i. collecting the gas volumetric flow rate or duct static pressure for each capture device according to §63.3547(g);</p>
		<p>ii. reducing the data to 3-hour block averages; and</p>
		<p>iii. maintaining the 3-hour block average gas volumetric flow rate or duct static pressure for each capture device at or above the gas volumetric flow rate or duct static pressure limit.</p>

Table 5 to Subpart KKKK of Part 63. Applicability of General Provisions to Subpart KKKK

You must comply with the applicable General Provisions requirements according to the following table.

Citation	Subject	Applicable to subpart KKKK	Explanation
§63.1(a)(1)-(4)	General Applicability	Yes	
§63.1(a)(5)	[Reserved]	No	
§63.1(a)(6)	Source Category Listing	Yes	
§63.1(a)(7)-(9)	[Reserved]	No	
§63.1(a)(10)-(12)	Timing and Overlap Clarifications	Yes	
§63.1(b)(1)	Initial Applicability Determination	Yes	Applicability to subpart KKKK is also specified in §63.3481.
§63.1(b)(2)	[Reserved]	No	
§63.1(b)(3)	Applicability Determination Recordkeeping	Yes	
§63.1(c)(1)	Applicability After Standard Established	Yes	
§63.1(c)(2)-(3)	Applicability of Permit Program for Area Sources	No	Area sources are not subject to subpart KKKK.

§63.1(c)(4)-(5)	Extensions and Notifications	Yes	
§63.1(e)	Applicability of Permit Program Before Relevant Standard is Set	Yes	
§63.2	Definitions	Yes	Additional definitions are specified in §63.3561.
§63.3(a)-(c)	Units and Abbreviations	Yes	
§63.4(a)(1)-(5)	Prohibited Activities	Yes	
§63.4(b)-(c)	Circumvention/Fragmentation	Yes	
§63.5(a)	Construction/Reconstruction	Yes	
§63.5(b)(1)-(6)	Requirements for Existing, Newly Constructed, and Reconstructed Sources	Yes	
§63.5(d)	Application for Approval of Construction/Reconstruction	Yes	
§63.5(e)	Approval of Construction/Reconstruction	Yes	

§63.5(f)	Approval of Construction/ Reconstruction Based on Prior State Review	Yes	
§63.6(a)	Compliance With Standards and Maintenance Requirements - Applicability	Yes	
§63.6(b)(1)-(7)	Compliance Dates for New and Reconstructed Sources	Yes	Section 63.3483 specifies the compliance dates.
§63.6(c)(1)-(5)	Compliance Dates for Existing Sources	Yes	Section 63.3483 specifies the compliance dates.
§63.6(e)(1)-(2)	Operation and Maintenance	Yes	
§63.6(e)(3)	SSMP	Yes	Only sources using an add-on control device to comply with the standard must complete SSMP.
§63.6(f)(1)	Compliance Except During Startup, Shutdown, and Malfunction	Yes	Applies only to sources using an add-on control device to comply with the standards.
§63.6(f)(2)-(3)	Methods for Determining Compliance	Yes	

§63.6(g)(1)-(3)	Use of an Alternative Standard	Yes	
§63.6(h)	Compliance With Opacity/Visible Emission Standards	No	Subpart KKKK does not establish opacity standards and does not require continuous opacity monitoring systems (COMS).
§63.6(i)(1)-(14)	Extension of Compliance	Yes	
§63.6(i)(15)	[Reserved]	No	
§63.6(i)(16)	Compliance Extensions and Administrator's Authority	Yes	
§63.6(j)	Presidential Compliance Exemption	Yes	
§63.7(a)(1)	Performance Test Requirements - Applicability	Yes	Applies to all affected sources. Additional requirements for performance testing are specified in §§63.3543, 63.3544, 63.3545, 63.3554, and 63.3555.

§63.7(a)(2)	Performance Test Requirements - Dates	Yes	Applies only to performance tests for capture system and control device efficiency at sources using these to comply with the standards. Sections 63.3540 and 63.3550 specify the schedule for performance test requirements that are earlier than those specified in §63.7(a)(2).
§63.7(a)(3)	Performance Tests Required By the Administrator	Yes	
§63.7(b)-(e)	Performance Test Requirements - Notification, Quality Assurance, Facilities Necessary for Safe Testing, Conditions During Test	Yes	Applies only to performance tests for capture system and add-on control device efficiency at sources using these to comply with the standards.

§63.7(f)	Performance Test Requirements - Use of Alternative Test Method	Yes	Applies to all test methods except those used to determine capture system efficiency.
§63.7(g)-(h)	Performance Test Requirements - Data Analysis, Recordkeeping, Reporting, Waiver of Test	Yes	Applies only to performance tests for capture system and add-on control device efficiency at sources using these to comply with the standards.
§63.8(a)(1)-(3)	Monitoring Requirements - Applicability	Yes	Applies only to monitoring of capture system and add-on control device efficiency at sources using these to comply with the standards. Additional requirements for monitoring are specified in §§63.3547 and 63.3557.
§63.8(a)(4)	Additional Monitoring Requirements	No	Subpart KKKK does not have monitoring requirements for flares.
§63.8(b)	Conduct of Monitoring	Yes	

§63.8(c)(1)-(3)	Continuous Monitoring System (CMS) Operation and Maintenance	Yes	Applies only to monitoring of capture system and add-on control device efficiency at sources using these to comply with the standards. Additional requirements for CMS operations and maintenance are specified in §§63.3547 and 63.3557.
§63.8(c)(4)	CMS	No	Sections 63.3547 and 63.3557 specify the requirements for the operation of CMS for capture systems and add-on control devices at sources using these to comply.
§63.8(c)(5)	COMS	No	Subpart KKKK does not have opacity or visible emission standards.

§63.8(c)(6)	CMS Requirements	No	Sections 63.3547 and 63.3557 specify the requirements for monitoring systems for capture systems and add-on control devices at sources using these to comply.
§63.8(c)(7)	CMS Out-of-control Periods	Yes	
§63.8(c)(8)	CMS Out-of-control Periods Reporting	No	Section 63.3511 requires reporting of CMS out of control periods.
§63.8(d)-(e)	Quality Control Program and CMS Performance Evaluation	No	
§63.8(f)(1)-(5)	Use of an Alternative Monitoring Method	Yes	
§63.8(f)(6)	Alternative to Relative Accuracy Test	No	

§63.8(g)(1)-(5)	Data Reduction	No	Sections 63.3542, 63.3547, 63.3552 and 63.3557 specify monitoring data reduction.
§63.9(a)	Notification Applicability	Yes	
§63.9(b)(1)-(2)	Initial Notifications	Yes	
§63.9(b)(3)	[Reserved]	No	
§63.9(b)(4)-(5)	Application for Approval of Construction or Reconstruction	Yes	
§63.9(c)	Request for Extension of Compliance	Yes	
§63.9(d)	Special Compliance Requirement Notification	Yes	
§63.9(e)	Notification of Performance Test	Yes	Applies only to capture system and add-on control device performance tests at sources using these to comply with the standards.

§63.9(f)	Notification of Visible Emissions/Opacity Test	No	Subpart KKKK does not have opacity or visible emission standards.
§63.9(g)(1)-(3)	Additional Notifications When Using CMS	No	
§63.9(h)(1)-(3)	Notification of Compliance Status	Yes	Section 63.3510 specifies the dates for submitting the notification of compliance status.
§63.9(h)(4)	[Reserved]	No	
§63.9(h)(5)-(6)	Clarifications	Yes	
§63.9(i)	Adjustment of Submittal Deadlines	Yes	
§63.9(j)	Change in Previous Information	Yes	
§63.10(a)	Recordkeeping/Reporting - Applicability and General Information	Yes	
§63.10(b)(1)	General Recordkeeping Requirements	Yes	Additional requirements are specified in §§63.3512 and 63.3513.

§63.10(b)(2)(i)-(v)	Recordkeeping Relevant to Startup, Shutdown, and Malfunction Periods and CMS	Yes	Requirements for Startup, Shutdown, and Malfunction records only apply to add-on control devices used to comply with the standards.
§63.10(b)(2)(vi)-(xi)		Yes	
§63.10(b)(2)(xii)	Records	Yes	
§63.10(b)(2)(xiii)		No	
§63.10(b)(2)(xiv)		Yes	
§63.10(b)(3)	Recordkeeping Requirements for Applicability Determinations	Yes	
§63.10(c)(1)	Additional Recordkeeping Requirements for Sources with CMS	Yes	
§63.10(c)(2)-(4)	[Reserved]	No	
§63.10(c)(5)-(6)		Yes	
§63.10(c)(7)-(8)		No	The same records are required in §63.3511(a)(7).
§63.10(c)(9)	[Reserved]	No	

§63.10(c)(10)-(15)		Yes	
§63.10(d)(1)	General Reporting Requirements	Yes	Additional requirements are specified in §63.3511.
§63.10(d)(2)	Report of Performance Test Results	Yes	Additional requirements are specified in §63.3511(b).
§63.10(d)(3)	Reporting Opacity or Visible Emissions Observations	No	Subpart KKKK does not require opacity or visible emissions observations.
§63.10(d)(4)	Progress Reports for Sources With Compliance Extensions	Yes	
§63.10(d)(5)	Startup, Shutdown, and Malfunction Reports	Yes	Applies only to add-on control devices at sources using these to comply with the standards.
§63.10(e)(1)-(2)	Additional CMS Reports	No	
§63.10(e)(3)	Excess Emissions/CMS Performance Reports	No	Section 63.3511(b) specifies the contents of periodic compliance reports.

§63.10(e)(4)	COMS Data Reports	No	Subpart KKKK does not specify requirements for opacity or COMS.
§63.10(f)	Recordkeeping/Reporting Waiver	Yes	
§63.11	Control Device Requirements/Flares	No	Subpart KKKK does not specify use of flares for compliance.
§63.12	State Authority and Delegations	Yes	
§63.13	Addresses	Yes	
§63.14	Incorporation by Reference	Yes	
§63.15	Availability of Information/Confidentiality	Yes	

Table 6 to Subpart KKKK of Part 63. Default Organic HAP Mass Fraction for Solvents and Solvent Blends

You may use the mass fraction values in the following table for solvent blends for which you do not have test data or manufacturer's formulation data.

Solvent/Solvent blend	CAS. No.	Average Organic HAP Mass Fraction	Typical Organic HAP, Percent by Mass
1. Toluene	108-88-3	1.0	Toluene

2. Xylene(s)	1330-20-7	1.0	Xylenes, ethylbenzene
3. Hexane	110-54-3	0.5	n-hexane
4. n-Hexane	110-54-3	1.0	n-hexane
5. Ethylbenzene	100-41-4	1.0	Ethylbenzene
6. Aliphatic 140		0	None
7. Aromatic 100		0.02	1% xylene, 1% cumene
8. Aromatic 150		0.09	Naphthalene
9. Aromatic naphtha	64742-95-6	0.02	1% xylene, 1% cumene
10. Aromatic solvent	64742-94-5	0.1	Naphthalene
11. Exempt mineral spirits	8032-32-4	0	None
12. Ligroines (VM & P)	8032-32-4	0	None
13. Lactol spirits	64742-89-6	0.15	Toluene
14. Low aromatic white spirit	64742-82-1	0	None
15. Mineral spirits	64742-88-7	0.01	Xylenes
16. Hydrotreated naphtha	64742-48-9	0	None
17. Hydrotreated light distillate	64742-47-8	0.001	Toluene
18. Stoddard solvent	8052-41-3	0.01	Xylenes
19. Super high-flash naphtha	64742-95-6	0.05	Xylenes
20. Varsol® solvent	8052-49-3	0.01	0.5% xylenes, 0.5% ethylbenzene
21. VM & P naphtha	64742-89-8	0.06	3% toluene, 3% xylene
22. Petroleum distillate mixture	68477-31-6	0.08	4% naphthalene, 4% biphenyl

Table 7 to Subpart KKKK of Part 63. Default Organic HAP Mass Fraction for Petroleum Solvent Groups^a

You may use the mass fraction values in the following table for solvent blends for which you do not have test data or manufacturer's formulation data.

Solvent Type	Average Organic HAP Mass Fraction	Typical organic HAP, percent by mass
Aliphatic ^b	0.03	1% Xylene, 1% Toluene, and 1% Ethylbenzene
Aromatic ^c	0.06	4% Xylene, 1% Toluene, and 1% Ethylbenzene

^a Use this table only if the solvent blend does not match any of the solvent blends in Table 6 to this subpart and you only know whether the blend is aliphatic or aromatic.

^b e.g., Mineral Spirits 135, Mineral Spirits 150 EC, Naphtha, Mixed Hydrocarbon, Aliphatic Hydrocarbon, Aliphatic Naphtha, Naphthol Spirits, Petroleum Spirits, Petroleum Oil, Petroleum Naphtha, Solvent Naphtha, Solvent Blend.

^c e.g., Medium-flash Naphtha, High-flash Naphtha, Aromatic Naphtha, Light Aromatic Naphtha, Light Aromatic Hydrocarbons, Aromatic Hydrocarbons, Light Aromatic Solvent.